STATE LIBRARY OF PENNSYLVANIA
3 0144 00341201 2

Py P 9768. 19/4

CLASS ~~P38.39~~ BOOK ~~2.4~~

VOLUME 1939-43

PENNSYLVANIA
STATE LIBRARY

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

1939

Record of Accidents Involving the Facilities or Operations of Transportation and Service Utilities and Contract Carriers

Harrisburg, Pennsylvania
February 27, 1940

P 38.39

Digitized by the Internet Archive
in 2017 with funding from
This project is made possible by a grant from the Institute of Museum and Library Services as administered by the Pennsylvania Department of Education through the Office of Commonwealth Libraries

https://archive.org/details/recordofaccident00unse

PENNSYLVANIA PUBLIC UTILITY COMMISSION
Bureau of Engineering

Harrisburg, Pennsylvania
February 27, 1940

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We submit herewith a report by the Bureau of Engineering of accidents involving the facilities or operations of public utilities in Pennsylvania in 1939.

Under the provision of Section No. 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1939, the following number of utilities providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	60	Electric	61
Street Railways	22	Gas	145
Pipe Lines	6	Water	510
Ferries	21	Telephone	246
Express	1	Sewerage	18
Common Carriers by Water	7	Canal	2
Bus-Scheduled Service	294	Elevator	3
Taxi-Call and Demand	439	Wharfage	5
Bus-Group and Party	197	Bridge (Toll)	17
Truck-Common Carriers	13,695	Telegraph	4

Total - 15,761

134046

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 4559 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of life for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $100 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies in 1939, were required to report all personal injury accidents. For this reason, while the number of personal injury accidents reported by street railways may appear high, it must be borne in mind that a substantial proportion of the injuries are of a minor nature. Under the provisions of General Order 29, Revised, effective July 1, 1939, common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, while formerly, all accidents were to be reported, irrespective of the extent of injury resulting, or the amount of property damage involved.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

C. Radford Berry.

C. Radford Berry,
Director of Bureau

TABLE NO.	INDEX OF TABLES	PAGE

1 - Summary of Utility Accidents Involving Personal Injuries - - - - - - - - - - - - - - - - - - 1
2 - Classification of Persons Killed and Injured in Utility Accidents - - - - - - - - - - - - - - 1
3 - Casualty Accidents on Steam Railroads - 2
4 - Three Year Comparison of Non-Casualty Accidents on Steam Railroads - - - - - - - - - - - - - 3
5 - Non-Casualty Accidents in 1939 - 3
6 - Three Year Comparison of Persons Killed and Injured on Steam Railroads - - - - - - - - - - - 3
7 - Accidents to Employees of Steam Railroads in Pennsylvania in 1939 - - - - - - - - - - - - - 4
8 - Accidents on Street Railways - 5
9 - Comparison of Persons Killed and Injured on Street Railways - - - - - - - - - - - - - - - - 5
10 - Summary of Accidents Involving Regulated Transportation by Motor Vehicle - - - - - - - - - - 6
11 - Summary of All Classes of Accidents Involving Regulated Motor Transportation - - - - - - - - 7
12 - Three Year Comparison of Accidents, Casualties and Property Damage - Regulated Motor Transportation - 7
13 - Summary of Accidents Involving Service Utilities - 8
14 - Comparison of Persons Killed and Injured in Accidents Involving Service Utilities - - - - - - 8
15 - Accidents Involving Electric Service Utilities - 9
16 - Comparison of Persons Killed and Injured in Accidents Involving Electric Service Utilities - - - 9
17 - Accidents Involving Gas Service Utilities - 10
18 - Comparison of Persons Killed and Injured in Accidents Involving Gas Service Utilities - - - - 10
19 - Accidents Involving Water Service Utilities - 11
20 - Comparison of Persons Killed and Injured in Accidents Involving Water Service Utilities - - - - 11
21 - Accidents Involving Telephone and Telegraph Utilities - - - - - - - - - - - - - - - - - - 12
22 - Comparison of Persons Killed and Injured in Accidents Involving Telephone and Telegraph Utilities - 12
23 - Accidents Involving Other Utilities - 13
24 - Comparison of Persons Killed and Injured in Accidents Involving Other Service Utilities - - - - 13

APPENDIX

Grade Crossing Data

A - Protected and Unprotected Grade Crossings - 14
B - Types of Grade Crossing Protection - 14
C - Grade Crossing Accidents on Steam Railroads - 15
D - Persons Killed and Injured at Grade Crossings on Steam Railroads - - - - - - - - - - - - - 15
E - Casualties at Protected and Unprotected Grade Crossings - 1937, 1938 and 1939 - - - - - - - - 16

TABLE NO. INDEX (cont'd.) PAGE

F - Character of Location Where Grade Crossing Accident Occurred - 1937, 1938 and 1939 - - - - - - - 17
G - Period of Day When Grade Crossing Accident Occurred - 1937, 1938 and 1939 - - - - - - - - - - 18
H - Character of Track Where Grade Crossing Accident Occurred - 1937, 1938 and 1939 - - - - - - - - 19
I - Casualties Resulting From Accidents Involving Contact with Trains - 1937, 1938 and 1939 - - - - 19
J - Accidents Involving Vehicles a t Unprotected and Protected Public Grade Crossings Resulting in No Injuries to Persons - 1937, 1938 and 1939 - - - - - - - - - - - - - - 19
K - Detailed analysis of Casualties and Accidents Involving Automobiles at Grade Crossings - - - - - 20
L - Details of Train Movements where Grade Crossing Accidents Occurred - - - - - - - - - - - - - 20
M - Accidents and Casualties Involving Automobiles at Protected Grade Crossings - 1937, 1938 and 1939 - 21
N - Casualty and Non-Casualty Accidents Involving Contact with Trains at Grade Crossings Protected by Gates - 21
O - Crossing Gates and Flashing Light Signals Struck and Damaged by Automobiles (Contact not Made with Engine or Train) - 1937, 1938 and 1939 - - - - - - - - - - - - - - - - 22
P - Accidents and Casualties Occurring During time Crossings were Unprotected at Public Grade Crossings Protected Part-Time by Watchman and Gates 1930 - 1939 - - - - - - - - - - 22
Q - Condition of Weather Where Grade Crossing Accident Occurred - 1939 - - - - - - - - - - - - 22
R - Chart Showing Casualty Accidents and Number of Fatalities at Grade Crossings over Steam Railroad Tracks in Pennsylvania, 1930 - 1939 - - - - - - - - - - - - - - - - - - 23

DETAILED INFORMATION PERTAINING TO ACCIDENTS
INVOLVING REGULATED MOTOR TRANSPORTATION

I - Accidents Involving Call & Demand Service in Regulated Motor Transportation - - - - - - - - - 24
II - Accidents Involving Schedule Bus Service in Regulated Motor Transportation - - - - - - - - - - 25
III - Accidents Involving Group & Party Service in Regulated Motor Transportation - - - - - - - - - 26
IV - Accidents Involving Freight and Merchandise Service in Regulated Motor Transportation - - - - - 27
V - Accidents Involving Contract Carrier Service in Regulated Motor Transportation - - - - - - - - 28
VI - Comparison of Persons Killed and Injured in Accidents involving Call & Demand Service - - - - - 29
VII - Comparison of Persons Killed and Injured in Accidents Involving Schedule Bus Service - - - - - 29
VIII - Comparison of Persons Killed and Injured in Accidents Involving Group & Party Service - - - - - 29
IX - Comparison of Persons Killed and Injured in Accidents Involving Freight and Merchandise Service - 30
X - Comparison of Persons Killed and Injured in Accidents Involving Contract Carrier Service - - - - 30

TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS	PER CENT OF TOTAL KILLED	PER CENT OF TOTAL INJURED
Steam Railroad	1579	304	1466	24.43	64.27	20.1[illegible]
Street Railway	2556	50	2946	39.55	1.[illegible]	40.[illegible]
Motor Transportation	1256	66	1751	19.47	13.[illegible]	24.[illegible]
Electric	412	27	401	6.37	5.71	5.[illegible]
Gas	218	11	282	3.37	2.33	3.[illegible]
Water	183	2	182	2.83	.42	2.5
Telephone and Telegraph	195	6	190	3.02	1.27	2.61
Other Utilities	62	7	63	.96	1.48	.9[illegible]
TOTAL	6463	473	7281	100.00	100.00	100.[illegible]

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

K - Killed
I - Injured

	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	44	751		110	8	73	12	349	1	172	1	178	5	142	1	30	72	1805	15.22	24.78
Trespasser	186	131	7	71	1	6	2	10		1	1			1	6	3	203	223	42.[illegible]	3.[illegible]
Other	70	386		66	7	43	13	37	2	31		4	1	45		30	93	642	19.[illegible]	8.[illegible]
Passenger, Patron or Consumer	4	198	2	1801	4	979		5	8	78				2			18	3063	3.81	42.[illegible]
Pedestrian			24	297	18	167											42	464	8.88	6.3[illegible]
Occupant Other Vehicle			17	601	28	483											45	1084	9.51	14.[illegible]
TOTAL	304	1466	50	2946	66	1751	27	401	11	282	2	182	6	190	7	63	473	7281		
Per Cent Killed	64.3		10.6		13.9		5.7		2.3		.4		1.3		1.5				1[illegible]	
Per Cent Injured		20.1		40.5		24.0		5.5		3.9		2.5		2.6		.9				1[illegible]

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYES		PASSENGERS		TRESPASSERS		*OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
24	Collisions	2	32		6					2	38	.7	2.6
243	Grade Crossings (For details-see appendix)		11					63	310	63	321	20.7	21.9
19	Derailments	5	26				3			5	29	1.6	2.0
3	Parting of trains		5								5		.3
127	At station or loading platforms		8	1	99		3		16	1	126	.3	8.6
26	Defect or failure of roadway or equipment		22		3		1		1		27		1.8
23	Switching		22						1		23		1.6
44	Struck overhead or side obstruction	6	31			1	6		1	7	38	2.3	2.6
53	Repairing track or roadbed	1	52						2	1	54	.3	3.7
45	Handling freight or baggage		25					1	19	1	44	.3	3.0
26	Coupling or uncoupling	2	24							2	24	.7	1.6
184	Falling from locomotive or car	10	120		19	10	25	1		21	164	6.9	11.2
130	Getting on or off locomotive or car	1	77	1	31	1	18		1	3	127	1.0	8.7
275	Struck by locomotive or car	14	28	2		172	52	5	10	193	90	63.5	6.1
39	Operating hand brakes		39								39		2.7
53	Sudden starting or stopping of trains	1	53							1	53	.3	3.6
45	On or about locomotive		47						1		48		3.3
4	Coming in contact with catenary wire		2				2				4		.3
216	Miscellaneous	2	127		40	2	21		24	4	212	1.3	14.4
1579	TOTAL	44	751	4	198	186	131	70	386	304	1466		
	Per Cent Killed	14.5		1.3		61.2		23.0				100.0	
	Per Cent Injured		51.2		13.5		8.9		26.4				100.0

* "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed
I - Injured

TABLE NO. 4

STEAM RAILROADS
THREE YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS
(PROPERTY DAMAGE $150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECR. **	PROPERTY DAMAGE	PER CENT INCREASE OR DECR. **
1937	781	- 3.69	$595,282	+17.74
1938	579	-25.86	386,831	-31.78
1939	774	+33.68	605,247	+54.33

** Comparison with previous year.

TABLE NO. 5

STEAM RAILROADS - 1939
NON-CASUALTY ACCIDENTS
(PROPERTY DAMAGE 150.00 OR MORE)

COLLISIONS [illegible]	26
[illegible]	100
DERAILMENTS [illegible]	271
[illegible]	102
DEFECT OR FAILURE OF VEHICLE OR EQUIPMENT	171
MISCELLANEOUS	[illegible]
TOTAL	774

TABLE NO. 6

THREE YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% Incr. or Decr.*	INJURED			% Increase or Decrease*
	1937	1938	1939		1937	1938	1939	
EMPLOYEES	68	42	44	+ 4.76	1120	536	751	+ 32.[illegible]
PASSENGERS	3	3	4	+33.33	232	175	1[illegible]8	+ [illegible]
TRESPASSERS	227	176	186	+ 5.68	158	128	131	+ 2.31
OTHER ***	95	50	70	+10.00	478	331	386	+ [illegible]
TOTAL	393	271	304	+12.18	1958	1250	1466	+17.2[illegible]

* Comparison of 1939 with 1938
*** OTHER consists chiefly of travellers on Streets and Highways.

TABLE NO. 7

ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA
- 1939 -

OCCUPATION	KILLED	INJURED	PER CENT KILLED	PER CENT INJURED
Road Engineers	2	31	4.55	4.13
Road Fireman	5	39	11.36	5.19
Road Conductors	3	66	6.82	8.79
Road Brakemen	10	146	22.73	19.44
Road Flagmen	-	31	--	4.13
Road Baggagemen	-	5	--	.67
Yard Engineers and Firemen	-	27	--	3.60
Yard Brakemen and Conductors	13	248	29.55	33.02
Yard Masters and Assistants	-	7	--	.93
Yard Switch Tenders	-	5	--	.67
Crossing Watchmen	-	5	--	.67
Track Walkers	1	1	2.27	.13
Sectionmen and Work Train Laborers	4	68	9.09	9.05
Signalmen and Signal Maintainers	1	2	2.27	.27
Station Baggagemen	-	3	--	.39
Freight Handlers	-	7	--	.93
Car Cleaners	-	1	--	.13
Car Inspectors	1	5	2.27	.67
Car Repairmen	1	6	2.27	.80
Carpenters	1	2	2.27	.27
Dining Car Employees	-	24	--	3.20
Miscellaneous	-	16	--	2.12
Employees Not on Duty	2	6	4.55	.80
TOTAL	44	751	100.00	100.00

TABLE NO. 8 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
22	Collision of Cars		3		59				6						68		1.3
563	Collision of Car and Vehicle		11		242			17	591	1	9		75	18	978	36.0	32.4
329	Struck by Car		5	1	7	4	4		1	22	285		3	27	311	54.0	17.2
16	Derailment of Car				27				3	1	3			1	33	1.0	1.1
40	Contact with overhead or side obst.				6	1	39							1	46	.2	1.5
1	Contact with trolley or feed wire		1												1		.0
2	Contact with third rail			1		1								2		4.0	
41	Defect or failure of Roadway or equip.		5		38								3		46		1.7
117	Caught by folding door				117										117		4.3
157	Boarding standing car		3		154										157		5.8
494	Falling from car		11		466	1	21							1	498	2.0	18.3
386	Falling within car		3		386										389		13.2
2	Jumping on or off car while in motion				1		1								2		.0
199	At elevated or subway platforms		1		187								12		200		7.3
34	Repair work on right of way		34												34		1.2
153	Miscellaneous		33		111		6						17		167		6.1
2556	TOTAL		110	2	1801	7	71	17	601	24	297		33	50	2946		
	Per Cent Killed			4.0		14.0		34.0		48.0						100.0	
	Per Cent Injured		3.7		61.1		2.4		20.4		10.1		2.3				100.0

K - KILLED
I - INJURED

TABLE NO. 9 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1939 WITH 1938	YEAR			COMPARISON OF 1939 WITH 1938
	1937	1938	1939		1937	1938	1939	
Employees	-	-	-	---	30	106	110	+ 3.77%
Passengers	6	3	2	-33.33%	2230	1965	1801	- 8.35%
Trespassers	4	7	7	---	35	60	71	+18.33%
* Others	54	54	41	-24.07%	1309	1149	964	-16.10%
TOTAL	64	64	50	-21.88%	3604	3280	2946	-10.18%

* "Others" in 1939 consists of Occupants of Other Vehicles, Pedestrians or Persons Lawfully on Company Premises.

TABLE NO. 10 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
452	Collision with other vehicle	3	53		334		2		6	26	432	2	20	31	827	47.0	47.
14	Collision with fixed object	3	4		19	1			1					4	24	6.1	1.
121	Struck by auto-bus, taxicab or truck		2	1	6			10	92		2	3	13	14	115	21.2	6.
228	Boarding or alighting (standing vehicle)		1		227								1		229		13.
72	Running or walking into side of auto-bus, taxicab or truck				2			8	62				2	8	66	12.1	3.
64	Falling within vehicle				64										64		3.
45	Caught by vehicle doors		1	1	43									1	44	1.5	2.
7	Jumping on or off vehicle in motion				3		3						1		7		.
125	Sudden stop of vehicle				140										140		8.
27	Defect or failure of equipment		6		23				3		8	1	2	1	42	1.5	2.
58	Vehicle skidded	1	6	2	78				3	2	40		1	5	128	7.6	7.
12	Highway defect				12							1		1	12	1.5	.
2	Apparent reckless operation of vehicle		1		1										2		.
13	Loading or unloading of cargo		13												13		
	Repairs to vehicle enroute																
38	Miscellaneous	1	6		27		1				1		3	1	38	1.5	2.
1258	TOTAL	8	73	4	979	1	6	18	167	28	483	7	43	66	1751		
	Per Cent Killed	12.1		6.1		1.5		27.3		42.4		10.6				100.0	
	Per Cent Injured		4.2		55.9		.3		9.5		27.6		2.5				100.

K - Killed
I - Injured

TABLE NO. 11 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	NUMBER OF ACCIDENTS (NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	439	309	8	388	180	$ 21,513.13
Schedule Route (Bus Service)	294	676	23	993	2321	99,[illegible].06
Group & Party (Bus Service)	197	17	1	23	30	[illegible]
Freight and Merchandise (Truck)	13,695	193	29	254	1710	11,[illegible]
Contract Carrier (Persons & Property)	4,559	63	5	93	127	11,[illegible]
TOTAL	19,184	1258	66	1751	1938	271,[illegible]

Note: See Appendix, Tables I - V, for details of casualty accidents

TABLE NO. 12 - THREE YEAR COMPARISON OF ACCIDENTS, CASUALTIES AND PROPERTY DAMAGE
REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1937	6208	9282	- .82%	34	- 38.18%	1790	+ 12.79%	$ 245,592.79	- 4.70%
1938	17,626	9712	+ 4.63%	44	+ 29.41%	1781	- .50%	280,238.63	- 1[illegible].11%
1939	19,184	6226	- 35.89%	66	+ 50.00%	1751	- 1.68%	274,006.82	- 2.22%

* General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 13 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
54	Electric - Contact with charged wires or equipment	7	19	2	10	10	14		3	19	46	35.8	4.1
255	Falling - (other than into water)	4	220		2	1	26		2	5	250	9.4	22.3
145	Striking against or struck by objects	2	118				25		1	2	144	3.8	12.9
136	Handling materials		136								136		12.2
54	Defect or Failure of Equipment or machinery	3	33				20		50	3	103	5.7	9.2
95	Involving use of tools - no defect		97								97		8.7
80	Automobile Accident	2	37		3	3	49			5	89	9.4	8.0
6	Failure to use protective devices provided		6								6		.5
22	Burns - not from electric source		23				1				24		2.1
19	Explosion	1	5				4	1	13	2	22	3.8	2.0
8	Drowning			7		1				8		15.1	
17	Asphyxiation		4			1	2	7	15	8	21	15.1	1.9
126	Infection from minor wounds		125						1		126		11.3
53	Miscellaneous	1	48				6			1	54	1.9	4.8
1070	TOTAL	20	871	9	15	16	147	8	85	53	1118		
	Per Cent Killed	37.7		17.0		30.2		15.1				100.0	
	Per Cent Injured		77.9		1.3		13.2		7.6				100.0

K - KILLED I - INJURED

TABLE NO. 14 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED			INJURED		
	YEAR		COMPARISON OF 1939 WITH 1938	YEAR		COMPARISON OF 1939 WITH 1938
	1938	1939		1938	1939	
EMPLOYEES	13	20	+53.85%	904	871	- 3.65%
TRESPASSERS	15	9	-40.00%	6	15	+150.00%
OTHERS	14	16	+14.29%	154	147	- 4.55%
PATRONS OR CONSUMERS	18	8	-55.56%	88	85	- 3.41%
TOTAL	60	53	-11.67%	1152	1118	- 2.95%

TABLE NO. 15 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL			
		K	I	K	I	K	I	K	I	K	I	K	I
52	Electric - Contact with charged wires or equipment	7	17	2	10	10	14		3	19	44	[illegible]	[illegible]
114	Falling - (other than into water)	2	107			1	3		1	[illegible]	[illegible]	[illegible]	[illegible]
58	Striking against or struck by objects	1	51				3		1	1	[illegible]	[illegible]	[illegible]
56	Handling materials		56								56		[illegible]
19	Defect or failure of equipment or machinery	1	11							1	11	[illegible]	[illegible]
25	Involving use of tools - no defect		25								25		[illegible]
5	Automobile accident		4			1	2			1	[illegible]	[illegible]	[illegible]
4	Failure to use protective devices provided		4								4		[illegible]
9	Burns not from electric source		10				1				11		[illegible]
2	Explosion		1				1				2		[illegible]
1	Drowning					1				1		[illegible]	
	Asphyxiation												
43	Infection from minor wounds		43								43		[illegible]
24	Miscellaneous	1	20				3			1	23	[illegible]	[illegible]
412	TOTAL	12	349	2	10	13	37		5	27	401		
	Per Cent Killed	41.5		7.1		48.1						1[illegible]	
	Per Cent Injured	87.0		2.5		9.2		1.3				1[illegible]	

K - KILLED I- INJURED

TABLE NO. 16 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938	9	312	7		12	57	4	5	32	37[illegible]
1939	12	349	2	10	13	37		5	27	401

TABLE NO. 17 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wire or equipment												
44	Falling (other than into water)		33		1		10				44		15.6
20	Striking against or struck by objects		17				3				20		7.1
28	Handling materials		28								28		9.9
21	Defect or failure of equipment or machinery		11				11		50		72		25.6
24	Involving use of tools - no defect		26								26		9.2
7	Automobile accident		6			1	3			1	9	9.1	3.2
2	Failure to use protective devices		2								2		.7
6	Burns - not from electric source		6								6		2.1
16	Explosion	1	4				2	1	13	2	19	18.2	6.7
	Drowning												
16	Asphyxiation		3			1	2	7	15	8	20	72.7	7.1
25	Infection from minor wounds		25								25		8.9
9	Miscellaneous		11								11		3.9
218	TOTAL	1	172		1	2	31	8	78	11	282		
	Per Cent Killed	9.1				18.2		72.7				100.0	
	Per Cent Injured		61.0		.3		11.0		27.7				100.0

K - Killed I - Injured

TABLE NO. 18 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938	2	203			1	17	14	73	17	293
1939	1	172		1	2	31	8	78	11	282

TABLE NO. 19 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
		K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment										
36	Falling - (other than into water)	1	31				4			1	35
29	Striking against or struck by objects		29								29
26	Handling Materials		26								26
2	Defect or failure of equipment or machinery		2								2
34	Involving use of Tools - No Defect		34								34
7	Automobile Accident		8								8
	Failure to use Protective Devices provided										
4	Burns - Not from Electric Source		4								4
	Explosion										
1	Drowning			1						1	
11	Asphyxiation		1								1
37	Infection from minor wound		37								37
6	Miscellaneous		6								6
183	TOTAL	1	178	1			4			2	182
	Per cent Killed	50.0		50.0							
	Per cent Injured		97.8				2.2				

K-Killed I-Injured

TABLE NO. 20 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938	2	193	2	2		10			4	205
1939	1	178	1			4			2	182

TABLE NO. 21 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH UTILITIES

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
2	Electric - contact with charged wires or equipment		2								2		1.1
56	Falling - (other than into water)	1	45				9		1	1	55	16.7	28.9
35	Striking against or struck by objects	1	19				16			1	35	16.7	18.4
18	Handling materials		18								18		9.5
10	Defect or failure of equipment or machinery	2	8							2	8	33.3	4.2
9	Involving use of tools - no defect		9								9		4.7
36	Automobile accident	1	16		1	1	17			2	34	33.3	17.9
	Failure to use protective devices provided												
2	Burns - not from electric source		2								2		1.1
1	Explosion						1				1		.5
	Drowning												
	Asphyxiation												
15	Infection from minor wounds		14						1		15		7.9
11	Miscellaneous		9				2				11		5.8
195	TOTAL	5	142		1	1	45		2	6	190		
	Per Cent Killed	83.3				16.7						100.0	
	Per Cent Injured		74.7		.5		23.7		1.1				100.0

K-Killed I - Injured

TABLE NO. 22 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938		145			1	48		7	1	200
1939	5	142		1	1	45		2	6	190

TABLE NO. 23 - ACCIDENTS INVOLVING *OTHER UTILITIES

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
5	Falling - (other than into water)		4		1						5		7.[illegible]
3	Striking against or struck by objects		2				1				3		4.[illegible]
8	Handling materials		8								8		12.[illegible]
2	Defect or failure of equipment or machinery		1				1				2		3.[illegible]
3	Involving use of tools - no defect		3								3		4.[illegible]
25	Automobile accident	1	3		2		27			1	32	14.[illegible]	50.[illegible]
	Failure to use protective devices provided												
1	Burns - not from electric source		1								1		1.[illegible]
	Explosion												
6	Drowning			6						6		85.7	
	Asphyxiation												
6	Infection from minor wounds		6								6		9.[illegible]
3	Miscellaneous		2				1				3		4.[illegible]
62	TOTAL	1	30	6	3		30			7	63		
	Per Cent Killed	14.3		85.7								100.[illegible]	
	Per Cent Injured		47.6		4.8		47.6						100.0

TABLE NO. 24 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING *OTHER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938		51	6	4		22		1	6	78
1939	1	30	6	3		30			7	63

K - Killed
I - Injured

* Other utilities as herein used consist of: Bridge, Canal, Express, Ferry, Pipe Line and Sewerage

APPENDIX

-1939-

DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by Signals, Watchmen, etc.	2174	18.86
Protected by Trainmen	1409	12.22
Total Protected	3583	31.08
Unprotected	7946	68.92
TOTAL CROSSINGS	11,529	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	541	15.1
Watchmen	371	10.4
Flashing Light Signals	1076	30.0
Other Visual Signals	39	1.1
Bells	147	4.1
Trainmen	1409	39.3
TOTAL	3583	100.0

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons and Sleds, etc.		TOTAL			PER CENT OF TOTAL ACCIDENTS
CROSSING	NC	C	NC	C	NC	C	NC	C	ALL ACC.	
Unprotected	172	101		5	2	2	174	108	282	53.31
Protected by Gates	21	6		8			21	14	35	6.62
Protected by Watchman	17	9		3			17	12	29	5.48
Protected by Bell	10	9					10	9	19	3.59
Protected by Visual Signals	57	43		9		1	57	53	110	20.79
Protected by Trainmen	39	14				1	39	15	54	10.21
Total Accidents at Protected Crossings	144	81		20		2	144	103	247	46.69
Total Accidents - Non-Casualty	318				2		318			60.11
Total Accidents - Casualty		182		25	4			211		39.89
TOTAL ACCIDENTS	498		25		6			529		100.00
Per Cent of Total Accidents	94.14		4.73		1.13			100.0		

NC - Non-Casualty
C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons and Sleds, etc.		TOTAL			PER CENT OF TOTAL K & I
CROSSING	K	I	K	I	K	I	K	I	ALL ACC.	
Unprotected	16	149	3	2	1	1	20	152	172	51.34
Protected by gates	1	9	3	5			4	14	18	5.37
Protected by Watchman	2	19	2	1			4	20	24	7.16
Protected by Bell	4	9					4	9	13	3.88
Protected by Visual Signals	16	58	7	2		1	23	61	84	25.08
Protected by Trainmen		22				2		24	24	7.16
TOTAL	39	266	15	10	1	4	55	280	335	100.00
Killed and Injured at Protected Crossings	23	117	12	8		3	35	128	163	
Per Cent of Total Killed and Injured	91.05		7.46		1.49					100.00

Note: 5 Accidents occurred to crossing watchmen while on duty - 5 Injured
4 Accidents to other employees occurred at grade crossings - 6 Injured

K - Killed
I - Injured

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1937, 1938 and 1939

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS *	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR Decrease	Increase
PROTECTED	1937	2176	32		23.0
	1938	2159	21	34.4	
	1939	2174	35		67.[illegible]
UNPROTECTED	1937	9333	45		36.[illegible]
	1938	9508	19	57.8	
	1939	9355	20		5.3
			INJURED		
PROTECTED	1937	2176	123	17.0	
	1938	2159	85	30.9	
	1939	2174	128		50.6
UNPROTECTED	1937	9333	199	13.5	
	1938	9508	192	3.5	
	1939	9355	152	20.8	

*Not including those protected by trainmen

1342146

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENT OCCURRED
1937, 1938 and 1939

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	UNPROTECTED	1937	300	+ 46.3%	36	+ 140.0%	134	- 5.0%
		1938	139	- 53.7%	5	- 86.1%	93	- 30.6%
		1939	137	- 1.4%	8	+ 60.0%	76	- 18.3%
	PROTECTED	1937	196	- 15.1%	20	+ 17.6%	82	- 28.1%
		1938	140	- 28.6%	16	- 20.0%	56	- 31.7%
		1939	175	+ 25.0%	19	+ 18.8%	86	+ 53.6%
RURAL	UNPROTECTED	1937	59	- 62.7%	9	- 57.1%	65	- 27.0%
		1938	130	+ 120.3%	14	+ 55.6%	99	+ 52.3%
		1939	145	+ 11.5%	12	- 14.3%	76	- 23.2%
	PROTECTED	1937	83	+ 10.7%	12	+ 33.3%	41	+ 20.6%
		1938	50	- 39.8%	5	- 58.3%	29	- 29.3%
		1939	72	+ 44.0%	16	+ 220.0%	42	+ 44.8%

* URBAN - Cities or Boroughs with Population over 2,500

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING [illegible]
1937, 1938 and 1939

PERIOD OF DAY	YEAR	CASUALTY and NON-CASUALTY ACCIDENTS	PER CENT TRAFFIC [illegible]	PER CENT [illegible]
			DECREASE	INCREASE
DAYLIGHT	1937	275	9.5	
	1938	210	20.7	
	1939	238		9.2
		PERSONS KILLED		
	1937	17		[illegible]
	1938	18	61.7	
	1939	28		[illegible]
		PERSONS INJURED		
	1937	106	19.1	
	1938	123		16.0
	1939	124		.8
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1937	385	.5[illegible]	
	1938	241	33.6	
	1939	2[illegible]1		[illegible].7
		PERSONS KILLED		
	1937	30		15.4
	1938	22	26.7	
	1939	27		22.7
		PERSONS INJURED		
	1937	216	12.6	
	1938	154	28.7	
	1939	156		1.3

TABLE H

CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENT OCCURRED
1937, 1938 and 1939

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
ain Line	1937	609	77	301
	1938	437	40	262
	1939	492	55	260
ublic Siding	1937	13		10
	1938	12		6
	1939	27		11
rivate Siding	1937	16		11
	1938	10		[illegible]
	1939	10		9
Private rade Crossing Private Road)	1937	69	8	39
	1938	54	5	14
	1939	65	8	30

TABLE I - CASUALTIES RESULTING FROM ACCIDENTS
INVOLVING CONTACT WITH TRAINS
1937, 1938 and 1939

CONTACT BETWEEN TRAIN &	YEAR	NUMBER OF ACCIDENTS	KILLED	INJURED
Automobiles and Auto-Trucks	1937	214	55	308
	1938	159	30	253
	1939	182	39	266
Pedestrians	1937	30	20	12
	1938	20	8	12
	1939	25	15	10
Street Cars, Auto Buses, Taxicabs	1937			
	1938	3		11
	1939	1		2
Bicycles, Motorcycles, Wagons	1937	3	2	2
	1938	3	2	1
	1939	3	1	2

TABLE J - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS
RESULTING IN NO INJURIES TO PERSONS - 1937, 1938 and 1939

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
nprotected	1937	214		
	1938	147	31.3	
	1939	174		18.4
rotected	1937	177		
	1938	127	28.2	
	1939	144		13.4

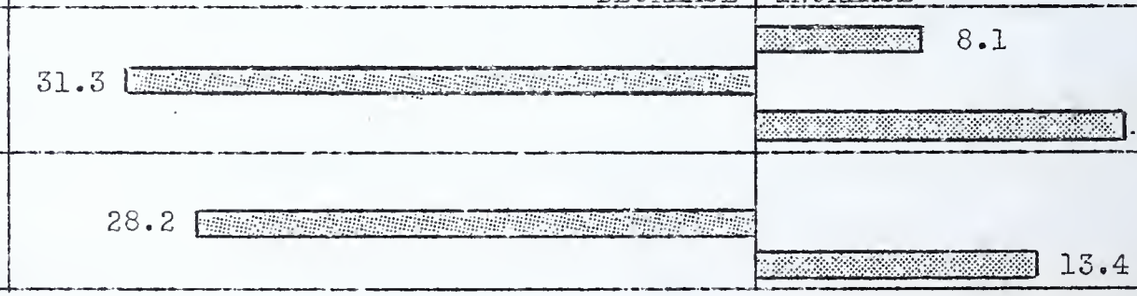


TABLE K - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS
INVOLVING AUTOMOBILES AT GRADE CROSSINGS
- 1939 -

TYPES OF ACCIDENTS	KILLED	INJURED	CASUALTY ACCIDENTS - [illegible]	PER CENT OF TOTAL ACCIDENTS
Auto struck by train	31	147	[illegible]	[illegible]
Auto driven into side of engine or train moving over crossing	7	62	[illegible]	[illegible]
Auto driven into side of engine or train standing on crossing		23	30	3.01
Auto driven through lowered gates into side of engine or train moving over crossing		5	11	1.33
Auto driven through lowered gates into side of engine or train standing on crossing			1	.11
Auto driven through lowered gates and struck by engine or train		1	4	[illegible]
Auto stalled on crossing and struck by train	1	8	62	[illegible]
Total Accidents involving contact between train and auto	39	266	408	[illegible]
Auto driven through crossing gate - no contact with train		16	401	[illegible]
Auto driven into flashing light signals - no contact with train		11	[illegible]	[illegible]
Total Accidents involving automobiles at grade crossings	39	292	[illegible]	100.00

TABLE L - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED
- 1939 -

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENT	CASUALTY ACCIDENT	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger Train - Normal Movement	69	55	28	49	22.44
Passenger Train - Reverse Movement	1	1		1	.31
Freight Train - Normal Movement	150	109	23	161	48.08
Freight Train - Reverse Movement	6	2		2	1.41
Freight Train - Car Ahead of Engine	5	1		1	1.13
Switching Movement - Engine Normal Ahead of Draft	30	18	2	20	[illegible]
Switching Movement - Engine Reverse Ahead of Draft	8	3		4	[illegible]
Switching Movement - Engine Pushing Cars	15	3		6	[illegible]
Light Engine - Normal Movement	21	11	2	11	[illegible]
Light Engine - Reverse Movement	12	6		6	[illegible]
Motor Track Cars		2		1	.31
Cars not attached	1				.19
TOTAL	318	211	55	280	100.00

TABLE M - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1937, 1938 and 1939

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	553	1937	491*	.888	3	15
	546	1938	351*	.64	3	6
	541	1939	328*	.606	1	24
Watchman	389	1937	39*	.10	4	16
	376	1938	34*	.09	4	10
	371	1939	31*	.084	2	19
Bell	154	1937	16	.104	1	6
	155	1938	16	.103		5
	147	1939	19	.129	4	9
Visual Signals	1,080	1937	130*	.121	9	49
	1,082	1938	108*	.099	6	39
	1,115	1939	131*	.117	16	69
Trainmen	**	1937	46	**		26
	**	1938	19	**		7
	1,409	1939	53	.037		22

* Including accidents not involving contact with trains
** No record kept of crossings protected by trainmen prior to 1939.

TABLE N - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES 1937, 1938 and 1939

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1937	8	2	5
	1938	3		1
	1939	10	1	3
Gates out of order	1937	2		1
	1938	1		
	1939			
Persons passing under or around lowered gates	1937	7	5	3
	1938	2	1	1
	1939	9	3	5
Automobile driven through lowered gates striking or being struck by train	1937	19		11
	1938	16	5	6
	1939	16		6
Unassigned	1937	10	2	
	1938	1		2
	1939			

TABLE O - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(Contact not made with engine or train)
1937 - 1938 and 1939

Type of Protection	Year	Accidents	Per cent Variation From Previous Year: Decrease	Per cent Variation From Previous Year: Increase
Gates Struck and Damaged	1937	455	7.9	
	1938	333	26.8	
	1939	301	9.6	
Flashing Light Signals Struck and Damaged	1937	14	43.1	
	1938	23		64.3
	1939	31		34.9

TABLE P - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS PROTECTED PART-TIME BY WATCHMEN AND GATES 1930 - 1939

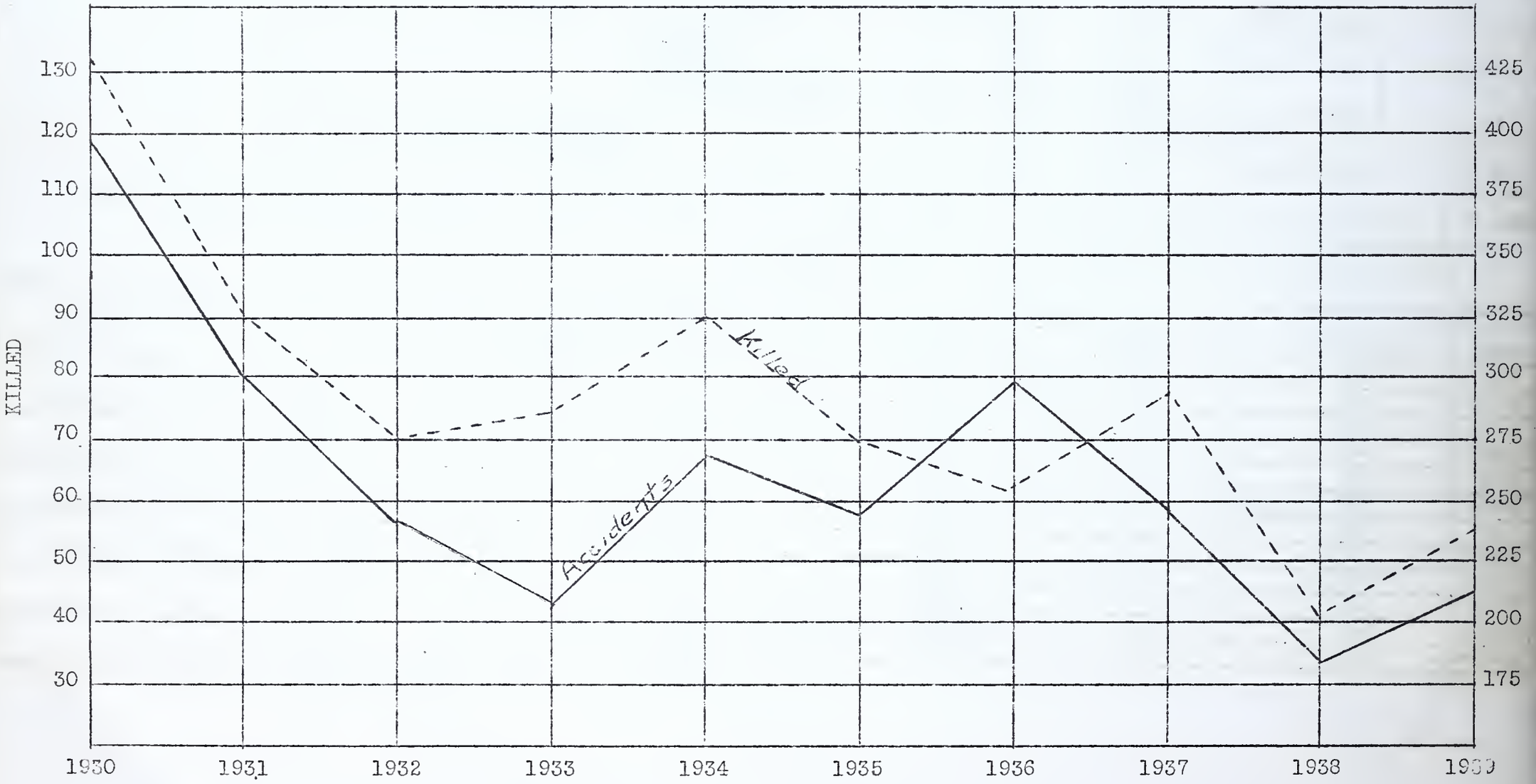
Year	Accidents	Persons: Killed	Persons: Injured
1930	62	9	45
1931	44	8	35
1932	49	3	50
1933	40	1	29
1934	45	7	33
1935	41	3	42
1936	30	2	30
1937	45	4	39
1938	31	1	26
1939	32	-	24
TOTAL	419	38	353
Average	41.9	3.8	35.3

TABLE Q - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED - 193[illegible]

Type of Weather	Non-Casualty Accidents	Casualty Accidents	Killed	Injured	Per Cent of Total Accidents
Clear	199	127	33	1[illegible]	[illegible]
Cloudy	67	46	9	[illegible]	[illegible]
Fog	8	[illegible]	-	1[illegible]	[illegible]
Snow	19	11	[illegible]	1[illegible]	[illegible]
Rain	25	20	[illegible]	[illegible]	[illegible]
TOTAL	318	211	[illegible]	18[illegible]	100.[illegible]

TABLE R - CHART SHOWING CASUALTY ACCIDENTS
AND NUMBER OF FATALITIES AT GRADE CROSSINGS
OVER STEAM RAILROAD TRACKS IN PENNSYLVANIA

1930 - 1939



DETAILED INFORMATION PERTAINING TO ACCIDENTS
INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
140	Collision with other vehicle		8		121				1		69		1		2[illegible]		5[illegible]
2	Collision with fixed object				1	1								1	1	12.5	[illegible]
37	Struck by taxicab				4			4	32		1	1		5	37	62.5	9.6
26	Running or walking into side taxicab							2	25					2	25	25.0	6.[illegible]
11	Boarding or alighting (Standing vehicle)				11										11		2.[illegible]
2	Falling within vehicle				2										2		.5
16	Caught by vehicle doors				16										16		4.1
3	Jumping on or off vehicle in motion				3										3		.[illegible]
48	Sudden stop of vehicle				54										54		13.[illegible]
2	Defect or failure of equip.				2										2		.5
19	Vehicle skidded		1		14				1		7				23		5.9
6	Highway defect				7										7		1.[illegible]
1	Apparent reckless operation of vehicle				1										1		.3
	Loading or unloading of cargo																
	Repairs to vehicle enroute																
6	Miscellaneous				6										6		1.[illegible]
309	TOTAL		9		242	1		6	59		77	1	1	8	3[illegible]		
	Per Cent Killed					12.5		75.0				12.5				100.0	
	Per Cent Injured		2.3		62.4				15.2		19.8		.[illegible]				100.0

K - Killed I - Injured

TABLE II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE
IN REGULATED MOTOR TRANSPORTATION

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
168	Collision with other vehicle	1	4		205				4	13	180		2	14	395	60.9	39.8
4	Collision with fixed object				14										14		1.4
45	Struck by auto bus				2			4	34			1	7	5	43	21.8	4.3
27	Running or walking into side of auto bus				2				25				1		28		2.8
208	Boarding or alighting (standing vehicle				209										209		21.1
61	Falling within vehicle				61										61		6.1
28	Caught by vehicle doors			1	27									1	27	4.3	2.7
1	Jumping on or off vehicle in motion						1								1		.1
73	Sudden stop of vehicle				82										82		8.3
13	Defect or failure of equip.		1		21				2		1				25		2.5
21	Vehicle skidded		1	2	60				1	1	19			3	81	13.0	8.2
5	Highway Defect				5										5		.5
	Apparent reckless operation of vehicle																
	Loading or unloading of cargo																
	Repairs to vehicle en route																
22	Miscellaneous		4		18										22		2.2
676	TOTAL	1	10	3	706		1	4	66	14	200	1	10	23	993		
	Per Cent Killed	4.3		13.0				17.5		60.9		4.3				100.0	
	Per Cent Injured		1.0		71.1		.1		6.7		20.1		1.0				100.0

K - KILLED I - INJURED

TABLE NO. III - ACCIDENTS INVOLVING GROUP AND PARTY SURVEY
IN REGULATED MOTOR TRANSPORTATION

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDLS-TRIANS		OCCUPANTS OF OTHER VEHICLE		[illegible]		[illegible]		[illegible]	
		K	I	K	I	K	I	K	I	K	I						
2	Collision with other vehicle				2					1	1						
1	Collision with fixed object				4												
1	Struck by auto bus								1								
	Running or walking into side of auto bus																
7	Boarding or alighting (standing vehicle				7												
1	Falling within vehicle				1												
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
4	Sudden stop of vehicle				4												
	Defect or failure of equip																
	Vehicle skidded																
	Highway Defect																
	Apparent reckless operation of vehicle																
	Loading or unloading of cargo																
	Repairs to vehicles on route																
1	Miscellaneous				3												
17	TOTAL				21				1	1	1						
	Per Cent Killed									100.0							
	Per Cent Injured			91.3				4.3									

K - KILLED I - INJURED

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT.	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
95	Collision with other vehicle	2	16				2			11	131	2	16	15	165	51.7	65.0
7	Collision with fixed object	3	4						1					3	5	10.3	2.0
27	Struck by truck		2						19		1	1	4	1	26	3.5	10.2
15	Running or walking into side of truck							5	9				1	5	10	17.2	3.9
1	Boarding or alighting (Standing vehicle)												1		1		.4
	Falling within vehicle																
1	Caught by vehicle doors		1												1		.4
3	Jumping on or off vehicle in motion						2						1		3		1.2
	Sudden stop of vehicle																
10	Defect or failure of equip.		5								4	1	2	1	11	3.5	4.3
13	Vehicle skidded	1	2						1	1	10		1	2	14	6.8	5.5
1	Highway defect											1		1		3.5	
1	Apparent reckless operation of vehicle		1												1		.4
11	Loading or unloading of cargo		11												11		4.3
	Repairs to vehicle enroute																
8	Miscellaneous	1	2				1						3	1	6	3.5	2.4
193	TOTAL	7	44				5	5	30	12	146	5	29	29	254		
	Per Cent Killed	24.2						17.2		41.4		17.2				100.0	
	Per Cent Injured		17.3				2.0		11.8		57.5		11.4				100.0

K - Killed

I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

CS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		[illegible]	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
7	Collision with other vehicle		5		6				1	1	51		1	1	64	[illegible]	[illegible]
	Collision with fixed object																
1	Struck by auto-bus or truck			1				2	6				2	3	8	60.0	[illegible]
4	Running or walking into side of auto-bus or truck							1	3					1	3	[illegible]	[illegible]
1	Boarding or alighting (Standing vehicle)		1												1		1.1
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
2	Defect or failure of equip.								1		3				4		[illegible]
5	Vehicle skidded		2		4						4				10		10.[illegible]
	Highway defect																
	Apparent reckless operation of vehicle																
2	Loading or unloading of cargo		2												2		2.1
	Repairs to vehicle enroute																
1	Miscellaneous										1				1		1.1
3	TOTAL		10	1	10			3	11	1	59		3	[illegible]	[illegible]		
	Per Cent Killed			20.0				60.0		20.0						100.0	
	Per Cent Injured		10.8		10.8				11.8		63.4		3.2				100.0

K - Killed

I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1937		36		296			7	144	1	110		1	8	587
1938		17		246			1	96	2	91			3	450
1939		9		242	1		6	59		77	1	1	8	388

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1937		23		562			6	86	11	266			17	937
1938		18		639			4	58	9	204		1	13	920
1939	1	10	3	706		1	4	66	14	200	1	10	23	993

TABLE NO. VIII- COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1937				12			1	1		6			1	19
1938		1		7			2	3	1	4			3	15
1939				21				1	1	1			1	23

K - Killed
I - Injured

TABLE NO. IX - COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1937		28				3	5	65	3	134		17	[illegible]	[illegible]
1938	4	80				8	5	41	4	161	3	[illegible]	[illegible]	[illegible]
1939	7	44				5	5	30	12	140	3	[illegible]	[illegible]	[illegible]

TABLE NO. X - COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
*1937														
1938		8	1	6	1	1	2	15	5	37		4	9	71
1939		10	1	10			3	11	1	59		3	5	93

* Contract Carriers were not required to file reports with this Commission in 1937

K - Killed I - Injured

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

1940

Record of Accidents Involving the Facilities or Operations of Transportation and Service Utilities and Contract Carriers

Harrisburg, Pennsylvania
March 26, 1941

P 38 3
2 4

PENNSYLVANIA PUBLIC UTILITY COMMISSION
Bureau of Engineering

Harrisburg, Pennsylvania
March 26, 1941

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities or [illegible] of public utilities in Pennsylvania in 1940.

Under the provision of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1940, the following number of utilities providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	70	Electric	58
Street Railways	21	Gas	143
Pipe Lines	6	Water	511
Ferries	21	Telephone	248
Express	3	Sewerage	1[illegible]
Common Carriers by Water	9	Canal	[illegible]
Bus-Scheduled Service	290	Elevator	3
Taxi-Call and Demand	430	Wharfage	[illegible]
Bus-Group and Party	203	Bridge (Toll)	1[illegible]
Truck-Common Carriers	11,730	Telegraph	[illegible]

Total - 13,787

In addition to the foregoing utilities, the Public Utility Law [illegible] shall assume jurisdiction over contract carriage by motor vehicles and the [illegible] have received permits from the Commission are likewise required to file reports [illegible].

In order to facilitate the reporting of accidents, the Commission's [illegible] as is practicable been made to conform to the rules of other agencies to which [illegible] are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees [illegible] days; injuries to other than an employee on duty, if the injury is sufficient to [illegible] injured person from following his customary vocation, or mode of living for a period [illegible]. Steam railroads are further required to report property damage accidents to a [illegible] or more, including the expense of clearing the wreck, and all accidents at grade crossings, [illegible] injuries occur. Street railway companies are required to report accidents resulting [illegible], requiring medical attention, which incapacitates the injured person from following his [illegible] vocation, or mode of living for a period of more than one day. Under the provisions of [illegible], Revised, effective July 1, 1939, common carriers and contract carriers by motor vehicle are required to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, while formerly, all accidents were to be reported, irrespective of the extent of injury resulting, or the amount of property damage involved.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

C. Radford Perry

C. Radford Perry
Director of Bureau

TABLE NO.

INDEX OF TABLES

1 - Summary of Utility Accidents Involving Personal Injuries
2 - Classification of Persons Killed and Injured in Utility Accidents
3 - Casualty Accidents on Steam Railroads
4 - Steam Railroad Non-Casualty Accidents
5 - Three-Year Comparison of Non-Casualty Accidents on Steam Railroads
6 - Three-Year Comparison of Persons Killed and Injured on Steam Railroads
7 - Accidents to Employees of Steam Railroads in Pennsylvania
8 - Accidents on Street Railways
9 - Comparison of Persons Killed and Injured on Street Railways
10 - Summary of Accidents Involving Regulated Transportation by Motor Vehicle
11 - Summary of All Classes of Accidents Involving Regulated Motor Transportation
12 - Three-Year Comparison of Casualty and Property Damage Accidents Regulated Motor Transportation
13 - Summary of Accidents Involving Service Utilities
14 - Comparison of Persons Killed and Injured in Accidents Involving Service Utilities
15 - Accidents Involving Electric Service Utilities
16 - Comparison of Persons Killed and Injured in Accidents Involving Electric Service Utilities
17 - Accidents Involving Gas Service Utilities
18 - Comparison of Persons Killed and Injured in Accidents Involving Gas Service Utilities
19 - Accidents Involving Water Service Utilities
20 - Comparison of Persons Killed and Injured in Accidents Involving Water Service Utilities
21 - Accidents Involving Telephone and Telegraph Utilities
22 - Comparison of Persons Killed and Injured in Accidents Involving Telephone and Telegraph Utilities
23 - Accidents Involving Other Utilities
24 - Comparison of Persons Killed and Injured in Accidents Involving Other Service Utilities

APPENDIX
Grade Crossing Data

A - Protected and Unprotected Grade Crossings
B - Types of Grade Crossing Protection
C - Grade Crossing Accidents on Steam Railroads
D - Persons Killed and Injured at Grade Crossings on Steam Railroads
E - Casualties at Protected and Unprotected Grade Crossings (1938, 1939 and 1940)
F - Character of Location Where Grade Crossing Accident Occurred (1938, 1939 and 1940)
G - Period of Day When Grade Crossing Accident Occurred (1938, 1939 and 1940)

TABLE NO. INDEX (Cont'd) PAGE

H - Hour of Day When Grade Crossing Accident Occurred - 19
I - Day of Week When Grade Crossing Accident Occurred - 19
J - Month of Year When Grade Crossing Accident Occurred - 19
K - Character of Track Where Grade Crossing Accident Occurred (1938, 1939 and 1940) - - - - - - - - - - 20
L - Casualties Resulting From Accidents Involving Contact with Trains (1938, 1939 and 1940) - - - - - - - 20
M - Accidents Involving Vehicles at Unprotected and Protected Public Grade Crossings Resulting in No Injuries to Persons (1938, 1939 and 1940) - 20
N - Detailed analysis of Casualties and Accidents Involving Automobiles at Grade Crossings - - - - - - - 21
O - Details of Train Movements where Grade Crossing Accidents Occurred - - - - - - - - - - - - - - - - - 21
P - Accidents and Casualties Involving Automobiles at Protected Grade Crossings (1938, 1939 and 1940) - - 22
Q - Casualty and Non-Casualty Accidents Involving Contact With Trains at Grade Crossings Protected by Gates (1938, 1939 and 1940) - 22
R - Crossing Gates and Flashing-Light Signals Struck and Damaged by Automobiles (No Contact with Engine or Train) 1938, 1939 and 1940 - 23
S - Accidents and Casualties Occurring During Time Crossings were Unprotected at Public Grade Crossings Protected Part Time by Watchman and Gates (1931 - 1940) - - - - - - - - - - - - - - - - - - 23
T - Condition of Weather Where Grade Crossing Accident Occurred - 23
U - Speed of Trains Where Grade Crossing Accidents Occurred - 24
V - Road Conditions Where Grade Crossing Accidents Occurred - 24
W - Age of Driver of Vehicles Involved in Grade Crossing Accidents - - - - - - - - - - - - - - - - - - - 24
X - Sex of Driver of Vehicles Involved in Grade Crossing Accidents - - - - - - - - - - - - - - - - - - - 24
Y - Familiarity of Driver of Vehicles with Grade Crossing Where Accidents Occurred - - - - - - - - - - - 24
Z - Grade Crossing Accidents Compared with Automobile Registrations (1931 - 1940) - - - - - - - - - - - 25
AA - Chart Showing Casualty Accidents and Number of Fatalities at Grade Crossings over Steam Railroad Tracks in Pennsylvania (1931 - 1940) - 26

DETAILED INFORMATION PERTAINING TO ACCIDENTS
INVOLVING REGULATED MOTOR TRANSPORTATION

I - Accidents Involving Call & Demand Service in Regulated Motor Transportation - - - - - - - - - - - - - 27
II - Accidents Involving Schedule Bus Service in Regulated Motor Transportation - - - - - - - - - - - - - 28
III - Accidents Involving Group & Party Service in Regulated Motor Transportation - - - - - - - - - - - - - 29
IV - Accidents Involving Freight and Merchandise Service in Regulated Motor Transportation - - - - - - - - 30
V - Accidents Involving Contract Carrier Service in Regulated Motor Transportation - - - - - - - - - - - 31
VI - Comparison of Persons Killed and Injured in Accidents Involving Call & Demand Service - - - - - - - 32
VII - Comparison of Persons Killed and Injured in Accidents Involving Scheduled Bus Service - - - - - - - 32
VIII - Comparison of Persons Killed and Injured in Accidents Involving Group & Party Service - - - - - - - 32
IX - Comparison of Persons Killed and Injured in Accidents Involving Freight & Merchandise Service - - - - 33
X - Comparison of Persons Killed and Injured in Accidents Involving Contract Carrier Service - - - - - - 33

TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT ACCIDENTS	PER CENT KILLED	PER CENT INJURED
Steam Railroad	1711	292	1684	20.23	63.76	17.47
Street Railway	4298	52	4882	50.82	11.35	[illegible]
Motor Transportation	1416	56	2030	16.74	12.23	[illegible]
Electric	502	38	480	5.94	[illegible]	[illegible]
Gas	194	14	227	2.29	3.06	2.36
Water	133	3	132	1.57	[illegible]	1.37
Telephone and Telegraph	172		173	2.03		[illegible]
Other Utilities	32	3	29	0.38	0.65	[illegible]
TOTAL	8458	458	9637	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

K - Killed
I - Injured

	STEAM RAIL-ROAD		STREET RAIL WAY		MOTOR TRANS-PORTA-TION		ELEC-TRIC		GAS		WATER		TELE-PHONE AND TELE-GRAPH		OTHER UTILI-TIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I		
Employee	50	950	2	221	1	107	7	427	1	126	1	127		144		24	62	[illegible]	[illegible]	[illegible]
Trespasser	171	98	11	68		8	5	5		2	1			1	3	1	191	[illegible]	[illegible]	[illegible]
Other	4	26		38	3	66	22	46	1	30	1	5		25		4	31	[illegible]	[illegible]	[illegible]
Passenger, Patron or Consumer	1	349		3000	1	1139	4	2	12	69				3			18	[illegible]	[illegible]	[illegible]
Pedestrian	12	11	26	405	18	144											56	[illegible]	[illegible]	[illegible]
Occupant Other Vehicle	54	250	13	1150	33	566											100	[illegible]	21.87	[illegible]
TOTAL	292	1684	52	4882	56	2030	38	480	14	227	3	132		173	3	29	458	9637		
Per Cent Killed	63.8		11.4		12.2		8.3		3.1		0.6				0.6				[illegible]	
Per Cent Injured		17.5		50.7		21.0		5.0		2.3		1.4		1.8		0.3				[illegible]

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF. ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		*OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
38	Collisions	5	46		92					5	138	1.7	8.2
214	Grade crossings (for details-see appendix)		7					66	261	66	268	22.6	15.9
24	Derailments	10	28			1	2			11	30	3.8	1.8
74	At station or loading platforms		3		69			1	1	1	73	0.3	4.3
42	Defect or failure of roadway or equipment		31		13		1				45		2.7
28	Operating switches		28								28		1.7
64	Struck overhead or side obstruction	5	56				4			5	60	1.7	3.6
122	Repairing track or roadbed	2	121							2	121	0.7	7.2
9	Handling Freight or Baggage		6						5		11		0.7
53	Coupling or uncoupling	2	51							2	51	0.7	3.0
88	Falling on Locomotive or car		47		36				7		90		5.3
148	Falling from locomotive or car	4	106	1	11	9	16	1	1	15	134	5.2	8.0
267	Getting on or off locomotive or car		154		100	1	9		3	1	266	0.3	15.8
265	Struck by locomotive or car	20	29		2	159	54	2	3	181	88	62.0	5.2
68	Operating hand brakes		68								68		4.0
51	Sudden starting or stopping of trains		49		9						58		3.4
4	Coming in contact with catenary wire	2					2			2	2	0.7	0.1
48	On or about locomotive		49								49		2.9
104	Miscellaneous		71		17	1	10		6	1	104	0.3	6.2
1711	TOTAL	50	950	1	349	171	98	70	287	292	1684		
	Per Cent Killed	17.1		0.3		58.6		24.0				100.0	
	Per Cent Injured		56.4		20.7		5.8		17.1				100.0

* "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed
I - Injured

TABLE NO. 4

STEAM RAILROADS - 1940
NON-CASUALTY ACCIDENTS
(PROPERTY DAMAGE $150 OR MORE.)

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL
COLLISIONS:			
MAIN TRACK	41		
YARD TRACK	230	271	26.08
DERAILMENTS:			
MAIN TRACK	331		
YARD TRACK	201	532*	51.20
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		179	17.23
MISCELLANEOUS		57	5.49
TOTAL		1039	100.00

*Note: 349 of the 532 Derailments (65.6%) were caused by defects or failure of roadway or equipment

[illegible]

[illegible]

YEAR	NUMBER OF ACCIDENTS	[illegible]	[illegible]
1938	579	[illegible]	[illegible]
1939	774	[illegible]	[illegible]
1940	1039	[illegible]	[illegible]

*Comparison with [illegible]

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED 1938	KILLED 1939	KILLED 1940	% INCREASE OR DECREASE**	INJURED 1938	INJURED 1939	INJURED 1940	C[illegible]
EMPLOYEES	42	44	50	+ 13.64	566	751	[illegible]	[illegible]
PASSENGERS	3	4	1	- 75.00	175	199	34[illegible]	+ [illegible]
TRESPASSERS	176	186	171	- 8.06	128	131	[illegible]	- [illegible]
OTHERS ***	50	70	70		381	386	287	- [illegible]
TOTAL	271	304	292	- 3.95	1250	1466	1684	+ 14.[illegible]

**Comparison of 1940 with 1939
***Others consist chiefly of travelers on streets and highways

TABLE NO. 7

ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA
- 1940 -

OCCUPATION	KILLED	INJURED	PER CENT KILLED	PER CENT INJURED
Road Engineers	5	20	10.00	2.11
Road Firemen	5	43	10.00	4.53
Road Conductors	4	82	8.00	8.63
Road Brakemen	5	169	10.00	17.79
Road Flagmen	1	27	2.00	2.84
Road Baggagemen		7		0.74
Yard Engineers and Firemen		47		4.95
Yard Brakemen and Conductors	13	338	26.00	35.58
Yard Masters and Assistants		2		0.21
Yard Switch Tenders		8		0.84
Crossing Watchmen				
Track Walkers	3	4	6.00	0.42
Sectionmen and Work Train Laborers	6	142	12.00	14.95
Signalmen and Signal Maintainers	1	7	2.00	0.74
Station Baggagemen		1		0.10
Freight Handlers		1		0.10
Car Cleaners		4		0.42
Car Inspectors	2	9	4.00	0.95
Car Repairmen	1	10	2.00	1.05
Carpenters	1	2	2.00	0.21
Dining Car Employees		14		1.47
Miscellaneous	1	8	2.00	0.84
Employees Not on Duty	2	5	4.00	0.53
TOTAL	50	950	100.00	100.00

TABLE NO. 8 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES K	EMPLOYEES I	PASSENGERS K	PASSENGERS I	TRESPASSERS K	TRESPASSERS I	OCCUPANTS OF OTHER VEHICLES K	OCCUPANTS OF OTHER VEHICLES I	PEDESTRIANS K	PEDESTRIANS I	OTHERS K	OTHERS I
40	Collision of cars		5		102								
1072	Collision of car and vehicle		25		346			13	1142				
464	Struck by car		6		9	10	10			2	[illegible]		
37	Derailment of car		2		56				[illegible]				
55	Contact with overhead or side obst.				19	1	44						
3	Contact with trolley or feed wire	1	2										
-	Contact with third rail												
84	Defect or failure of roadway or equip.		8		81				3		1		
263	Caught by doors				267								
317	Boarding standing car		7		313								
636	Falling from car		10		623		7						
696	Falling within car		3		709								
12	Jumping on or off car while in motion		2		10								
344	At elevated or subway platforms		8		336		3						
114	Repair work on right of way	1	106		1		1				6		
161	Miscellaneous		37		128		3		1		5		
4298	TOTAL	2	221		3000	11	68	13	1160	[illegible]	[illegible]		
	Per Cent Killed	3.8				21.2		25.0		[illegible]			
	Per Cent Injured		4.5		61.4		1.4		23.6		6.3		

K - KILLED
I - INJURED

TABLE NO. 9 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

	KILLED				INJURED			
	YEAR			COMPARISON OF 1940 WITH 1939	YEAR			COMPARISON OF 1940 WITH 1939
	1938	1939	1940		1938	1939	1940	
Employees			2	+100.00%	106	110	221	[illegible]
Passengers	3	2		-100.00%	1965	1501	[illegible]	[illegible]
Trespassers	7	7	11	+ 57.14%	60	71	[illegible]	[illegible]
Occupants of other vehicles		17	13	- 23.53%		[illegible]	[illegible]	[illegible]
Pedestrians		24	26	+ 8.33%		[illegible]	[illegible]	[illegible]
Others	54				1149		[illegible]	[illegible]
TOTAL	64	50	52	+ 4.00%	3280	[illegible]	[illegible]	[illegible]

NOTE: In 1938 "Others" include occupants of other vehicles, pedestrians or persons lawfully on company premises.

TABLE NO. 10 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CE
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K
489	Collision with other vehicle		62		424				4	32	478	3	17	35	985	62.5
15	Collision with fixed object	1	4		13			1			4		3	2	24	3.6
123	Struck by auto-bus, taxicab or truck				16			12	81				25	12	122	21.4
63	Running or walking into side of auto-bus, taxicab or truck		1		4			5	52				6	5	63	8.9
272	Boarding or alighting (Standing vehicle)		2		270										272	
91	Falling within vehicle		1		95										96	
45	Caught by vehicle doors		1		44										45	
9	Jumping on or off vehicle in motion		3	1	1		8							1	12	1.8
126	Sudden stop of vehicle				138						1				139	
22	Defect or failure of equipment		1		13				3	1	8		1	1	26	1.8
85	Vehicle skidded		12		64				2		71		5		154	
21	Highway defect		2		20						1		1		24	
1	Apparent reckless operation of vehicle		1												1	
6	Loading or unloading of cargo		3										3		6	
48	Miscellaneous		14		37				2		3		5		61	
1416	TOTAL	1	107	1	1139		8	18	144	33	566	3	66	56	2030	
	Per Cent Killed	1.8		1.8				32.1		58.9		5.4				100.0
	Per Cent Injured		5.3		56.1		0.4		7.1		27.9		3.2			

K - Killed
I - Injured

TABLE NO. 11 - SUMMARY OF ALL CLASSES OF ACCIDENTS [illegible]

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	[illegible]	[illegible]	[illegible]	[illegible]
Call and Demand (Taxi Service)	430	341	5	470	[illegible]	[illegible]
Schedule Route (Bus Service)	290	843	29	1210	374	[illegible]
Group & Party (Bus Service)	203	16	1	22	2	[illegible]
Freight & Merchandise (Truck)	11,730	180	17	247	407	[illegible]
Contract Carrier (Persons and Property)	1,649	36	4	72	68	[illegible]
TOTAL	14,302	1,416	56	2,030	[illegible]	[illegible]

Note: See Appendix, Tables I - [illegible], for details of casualty accidents

TABLE NO. 12 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS, REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		[illegible]	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	[illegible]	[illegible]
1938	17,626	9,712	+ 4.63%	44	+29.41	1,781	- .50%	[illegible]	-14.11%
1939	19,184	6,226	-35.89%	66	+ 50.00%	1,751	- 1.68%	[illegible]	- [illegible]
1940	14,302	2,307	-62.95%	56	- 15.15%	2,030	+15.93%	[illegible]	[illegible]

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents [illegible] personal injury requiring medical, or property damage in the amount of [illegible] or more, [illegible] reported to the Commission.

TABLE NO. 13 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
76	Electric - Contact with charged wires or equipment	5	23	4	4	21	26	4	1	34	54	58.7	5.2
265	Falling - (other than into water)	1	235		1		28			1	264	1.7	25.4
137	Striking against or struck by objects		128				10				138		13.2
106	Handling materials		106								106		10.2
49	Defect or failure of equipment or machinery		28				8	1	47	1	83	1.7	8.0
86	Involving use of tools - no defect		86								86		8.3
64	Automobile accident		42				24				66		6.3
9	Failure to use protective devices provided	1	8							1	8	1.7	0.8
37	Burns - not from electric source		38		1		2				41		3.9
17	Explosion		4		2		2		12		20		1.9
10	Drowning	2		5	1	2				9	1	15.5	0.1
26	Asphyxiation		4			1	6	11	12	12	22	20.7	2.1
95	Infection from minor wounds		95								95		9.1
56	Miscellaneous		51				4		2		57		5.5
1033	TOTAL	9	848	9	9	24	110	16	74	58	1041		
	Per Cent Killed	15.5		15.5		41.4		27.6				100.0	
	Per Cent Injured		81.5		.9		10.5		7.1				100.0

K - KILLED I - INJURED

TABLE NO. 14 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1940 WITH 1939	YEAR			COMPARISON OF 1940 WITH 1939
	1938	1939	1940		1938	1939	1940	
EMPLOYEES	13	20	9	-55.00%	904	871	848	-2.64%
TRESPASSERS	15	9	9		6	15	9	-40.00%
OTHERS	14	16	24	+50.00%	154	147	110	-25.17%
PATRONS OR CONSUMERS	18	8	16	+100.00%	88	85	74	-12.94%
TOTAL	60	53	58	+9.43%	1152	1118	1041	-68.87%

TABLE NO. 15 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
71	Electric - Contact with charged wires or equipment	4	20	4	4	21	25	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
132	Falling - (other than into water)	1	118		1		12			[illegible]	[illegible]	[illegible]	[illegible]
79	Striking against or struck by objects		75				[illegible]						[illegible]
52	Handling materials		52							[illegible]			[illegible]
16	Defect or failure of equipment or machinery		14				2			[illegible]			[illegible]
37	Involving use of tools - no defect		37							[illegible]			[illegible]
21	Automobile accident		20				1			[illegible]			[illegible]
8	Failure to use protective devices provided	1	7							[illegible]	[illegible]	[illegible]	[illegible]
16	Burns - not from electric source		19										[illegible]
1	Explosion		1										[illegible]
3	Drowning	1		1		[illegible]						[illegible]	
	Asphyxiation												
44	Infection from minor wounds		44							[illegible]			[illegible]
22	Miscellaneous		20				1			[illegible]			[illegible]
502	TOTAL	7	427	5	5	22	40	[illegible]	[illegible]	[illegible]	[illegible]		
	Per Cent Killed	18.4		13.2		57.8		10.5				[illegible]	
	Per Cent Injured		89.0		1.0		9.6		.4				[illegible]

K - KILLED I - INJURED

TABLE NO. 16 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938	9	312	7		12	57	4	5	32	374
1939	12	349	2	10	13	37		5	27	401
1940	7	427	5	5	22	46	4	2	38	480

TABLE NO. 17 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Electric - Contact with charged wire or equipment	1								1		7.1	
42	Falling - (other than into water)		31				11				42		18.5
15	Striking against or struck by objects		14				1				15		6.6
15	Handling materials		15								15		6.6
20	Defect or failure of equipment or machinery		3				5	1	45	1	53	7.1	23.3
19	Involving use of tools - no defect		19								19		8.4
2	Automobile accident		1				1				2		0.9
	Failure to use protective devices												
11	Burns - not from electric source		10				2				12		5.3
16	Explosion		3		2		2		12		19		8.4
	Drowning												
26	Asphyxiation		4			1	6	11	12	12	22	85.7	9.7
16	Infection from minor wounds		16								16		7.0
11	Miscellaneous		10				2				12		5.3
194	TOTAL	1	126		2	1	30	12	69	14	227		
	Per Cent Killed	7.1				7.1		85.7				100.0	
	Per Cent Injured		55.5		0.9		13.2		30.4				100.0

K - Killed I - Injured

TABLE NO. 18 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938	2	203			1	17	14	73	17	293
1939	1	172		1	2	31	8	78	11	282
1940	1	126		2	1	30	12	69	14	227

TABLE NO. 19 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OF CONSUMERS		TOTAL		
		K	I	K	I	K	I	K	I	K	I	
	Electric - Contact with charged wires or equipment											
27	Falling - (other than into water)		25				2				27	[illegible]
19	Striking against or struck by objects		19								19	[illegible]
19	Handling materials		19								19	[illegible]
6	Defect or failure of equipment or machinery		6								6	[illegible]
19	Involving use of tools - no defect		19								19	[illegible]
9	Automobile accident		7				3				1	[illegible]
1	Failure to use protective devices provided		1								1	[illegible]
5	Burns - not from electric source		5								5	[illegible]
	Explosion											
3	Drowning	1		1		1				3		100.0
	Asphyxiation											
17	Infection from minor wounds		17								17	[illegible]
8	Miscellaneous		9								9	[illegible]
133	TOTAL	1	127	1		1	5			3	132	
	Per Cent Killed	33.3		33.3		33.3						100.0
	Per Cent Injured		96.2				3.8					100.0

K - KILLED I - INJURED

TABLE NO. 20 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OF CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938	2	193	2	2		10		2	[illegible]	[illegible]
1939	1	178	1			4			[illegible]	[illegible]
1940	1	127	1		1	5			[illegible]	[illegible]

TABLE NO. 21 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
4	Electric - Contact with charged wires or equipment		3				1				4		2.3
58	Falling - (other than into water)		55				3				58		33.5
20	Striking against or struck by objects		16				4				20		11.6
17	Handling materials		17								17		9.8
6	Defect or failure of equipment or machinery		4				1		1		6		3.5
8	Involving use of tools - no defect		8								8		4.6
27	Automobile accident		13				15				28		16.2
	Failure to use protective devices provided												
3	Burns - not from electric source		2		1						3		1.7
	Explosion												
	Drowning												
	Asphyxiation												
15	Infection from minor wounds		15								15		8.7
14	Miscellaneous		11				1		2		14		8.1
172	TOTAL		144		1		25		3		173		
	Per Cent Killed												
	Per Cent Injured		83.2		.6		14.4		1.8				100.0

K - KILLED I - INJURED

TABLE NO. 22 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1938		145			1	48		7	1	200
1939	5	142		1	1	45		2	6	190
1940		144		1		25		3		173

TABLE NO. 23 - ACCIDENTS INVOLVING OTHER UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES K	EMPLOYEES I	TRESPASSERS K	TRESPASSERS I	OTHERS K	OTHERS I
	Electric - Contact with charged wires or equipment						
6	Falling - (other than into water)		6				
4	Striking against or struck by objects		4				
3	Handling materials		3				
1	Defect or failure of equipment or machinery		1				
3	Involving use of tools - no defect		3				
5	Automobile accident		1				
	Failure to use protective devices provided						
2	Burns - not from electric source		2				
	Explosion						
4	Drowning			3	1		
	Asphyxiation						
3	Infection from minor wounds		3				
1	Miscellaneous		1				
32	TOTAL		24	3	1		4
	Per Cent Killed			100.0			
	Per Cent Injured		92.8		3.4		13.8

K - KILLED I - INJURED

TABLE NO. 24 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING *OTHER SERVICE UTILITIES

YEAR	EMPLOYEES K	EMPLOYEES I	TRESPASSERS K	TRESPASSERS I	OTHERS K	OTHERS I	PATRONS OR CONSUMERS K	PATRONS OR CONSUMERS I	TOTAL K	TOTAL I
1938		51	6	4		22		1	[illegible]	[illegible]
1939	1	30	6	3		30			[illegible]	[illegible]
1940		24	3	1		4			[illegible]	[illegible]

*Other utilities as herein used consist of: Bridge, Canal, Express, Ferry, [illegible]

APPENDIX
-1940-

DETAILED INFORMATION PERTAINING TO
ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2174	19.05
Protected by trainmen	1421	12.45
Total Protected	3595	31.50
Unprotected	7816	68.50
TOTAL CROSSINGS	11,411	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	539	15.0
Watchmen	359	10.0
Flashing light signals	1094	30.4
Other visual signals	38	1.1
Bells	144	4.0
Trainmen	1421	39.5
TOTAL	3595	100.0

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	251	103		7	2	1	253	111	364	55.15
Protected by gates	17	9		4	1	1	18	14	32	4.85
Protected by watchman	30	8		3			30	11	41	6.21
Protected by bell	16	10					16	10	26	3.94
Protected by visual signals	101	27		7	1		102	34	136	20.61
Protected by trainmen	46	13			2		48	13	61	9.24
Total Accidents at Protected Crossings	210	67		14	4	1	214	82	296	44.85
Total Accidents - Non-Casualty	461				6		467			70.76
Total Accidents - Casualty		170		21		2		193		29.24
TOTAL ACCIDENTS	631		21		8		660			100.00
Per Cent of Total Accidents	95.61		3.18		1.21		100.00			

NC - Non-Casualty
C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K and I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	30	137	4	5		1	34	143	177	57.47
Protected by gates	3	17	3	1		3	6	21	27	8.77
Protected by watchman	3	11	2	1			5	12	17	5.52
Protected by bell	3	16					3	16	19	6.17
Protected by visual signals	9	34	3	4			12	38	50	16.23
Protected by trainmen		18						18	18	5.84
TOTAL	48	233	12	11		4	60	248	308	100.00
Killed and injured at protected crossings	18	96	8	6		3	26	105	131	42.53
Per Cent of total killed and injured	91.23		7.47		1.30					100.00

K - Killed
I - Injured

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED CROSSINGS
1938, 1939 and 1940

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION	
				Decrease	Increase
*PROTECTED	1938	2159	21	34.4	
	1939	2174	35		[illegible]
	1940	2174	26	25.7	
UNPROTECTED	1938	9508	19	57.8	
	1939	9355	20		[illegible]
	1940	9237	34		[illegible]
			INJURED		
*PROTECTED	1938	2159	85	17.0	
	1939	2174	128		[illegible]
	1940	2174	105	[illegible].0	
UNPROTECTED	1938	9508	192	5.5	
	1939	9355	152	20.8	
	1940	9237	143	5.9	

* Not including those protected by trainmen

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENT OCCURRED
1938, 1939 and 1940

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	UNPROTECTED	1938	139	- 53.7%	5	- 86.1%	93	- 30.6%
		1939	137	- 1.4%	8	+ 60.0%	76	- 18.3%
		1940	168	+ 22.6%	11	+ 37.5%	56	- 26.3%
	PROTECTED	1938	140	- 28.6%	16	- 20.0%	56	- 31.7%
		1939	175	+ 25.0%	19	+ 18.8%	86	+ 53.6%
		1940	192	+ 9.7%	20	+ 5.26%	68	- 20.9%
RURAL	UNPROTECTED	1938	130	+120.3%	14	+ 55.6%	99	+ 52.3%
		1939	145	+ 11.5%	12	- 14.3%	76	- 23.2%
		1940	196	+ 35.2%	23	+ 91.7%	87	+ 14.5%
	PROTECTED	1938	50	- 39.8%	5	- 58.3%	29	- 29.3%
		1939	72	+ 44.0%	16	+220.0%	42	+ 44.8%
		1940	104	+ 44.4%	6	- 62.5%	37	- 11.9%

* Cities or boroughs with population over 2,500

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED
1938, 1939 and 1940

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR: DECREASE	PER CENT VARIATION FROM PREVIOUS YEAR: INCREASE
DAYLIGHT	1938	218	20.7	
	1939	238		9.2
	1940	293		23.1
		PERSONS KILLED		
	1938	18	61.7	
	1939	28		[illegible]
	1940	32		14.3
		PERSONS INJURED		
	1938	123	19.1	
	1939	124		0.8
	1940	96	22.6	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1938	241	33.6	
	1939	291		20.7
	1940	367		26.1
		PERSONS KILLED		
	1938	22	26.7	
	1939	27		22.7
	1940	28		3.7
		PERSONS INJURED		
	1938	154	28.7	
	1939	156		1.3
	1940	152	2.6	

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED
1940

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	25	3.79	2	12
1 to 1:59 a.m.	35	5.30	2	10
2 to 2:59 a.m.	25	3.79		5
3 to 3:59 a.m.	23	3.49	2	17
4 to 4:59 a.m.	12	1.82	1	2
5 to 5:59 a.m.	21	3.18	1	8
6 to 6:59 a.m.	23	3.49	4	10
7 to 7:59 a.m.	19	2.88	6	11
8 to 8:59 a.m.	22	3.33	3	10
9 to 9:59 a.m.	23	3.49	2	9
10 to 10:59 a.m.	26	3.94	3	8
11 to 11:59 a.m.	21	3.18		3
Noon to 12:59 p.m.	30	4.54		6
1 to 1:59 p.m.	24	3.63	1	5
2 to 2:59 p.m.	30	4.54	3	13
3 to 3:59 p.m.	30	4.54	3	7
4 to 4:59 p.m.	31	4.70	6	10
5 to 5:59 p.m.	25	3.79	4	1
6 to 6:59 p.m.	37	5.61		9
7 to 7:59 p.m.	36	5.45	1	19
8 to 8:59 p.m.	43	6.52	5	23
9 to 9:59 p.m.	27	4.09	4	16
10 to 10:59 p.m.	45	6.82	4	26
11 to 11:59 p.m.	27	4.09	3	8
TOTAL	660	100.00	60	248

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENT OCCURRED
1940

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	61	9.24	5	28
Monday	99	15.00	16	42
Tuesday	77	11.67	7	33
Wednesday	86	13.03	5	22
Thursday	109	16.51	11	34
Friday	109	16.51	7	57
Saturday	119	18.03	9	32
TOTAL	660	100.00	60	248

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENT OCCURRED
1940

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	94	14.24	5	39
February	69	10.46	4	13
March	53	8.03	6	16
April	51	7.73	8	23
May	35	5.30	1	18
June	42	6.36	4	15
July	20	3.03	2	3
August	25	3.79	2	6
September	52	7.88	8	18
October	50	7.58	6	28
November	81	12.27	8	35
December	88	13.33	6	34
TOTAL	660	100.00	60	248

TABLE K - CHARACTER OF TRACK WHERE
GRADE CROSSING ACCIDENT OCCURRED
1938, 1939 and 1940

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1938	437	40	262
	1939	492	55	260
	1940	559	60	225
Public Siding	1938	12		6
	1939	27		11
	1940	62		10
Private Siding	1938	10		9
	1939	10		9
	1940	39		13
Private Grade Crossing (Private Road)	1938	54	5	14
	1939	65	8	30
	1940	77	6	20

TABLE L - CASUALTIES RESULTING FROM
ACCIDENTS INVOLVING CONTACT WITH TRAINS
1938, 1939 and 1940

CONTACT BETWEEN TRAIN &	YEAR	NUMBER OF ACCIDENTS	[illegible]	[illegible]
Automobiles and Autotrucks	1938	[illegible]	[illegible]	[illegible]
	1939	[illegible]	[illegible]	[illegible]
	1940	[illegible]	[illegible]	[illegible]
Pedestrians	1938	[illegible]	[illegible]	[illegible]
	1939	[illegible]	[illegible]	[illegible]
	1940	[illegible]	[illegible]	[illegible]
Street Cars Auto.Buses Taxicabs	1938	3		[illegible]
	1939	1		[illegible]
	1940	1		[illegible]
Bicycles, Motorcycles, Wagons	1938	3	2	1
	1939	3	1	[illegible]
	1940	1		[illegible]

TABLE M - ACCIDENTS INVOLVING VEHICLES AT
UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS
RESULTING IN NO INJURIES TO PERSONS
1938, 1939 and 1940

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Unprotected	1938	147	31.3	
	1939	174		[illegible]
	1940	253		[illegible]
Protected	1938	127	23.2	
	1939	144		[illegible]
	1940	214		[illegible]

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS
1940

TYPE OF ACCIDENTS	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
Auto struck by train	37	139	312	26.76
Auto driven into side of engine or train moving over crossing	4	61	172	14.75
Auto driven into side of engine or train standing on crossing	1	22	49	4.20
Auto driven through lowered gates into side of engine or train moving over crossing		2	6	0.52
Auto driven through lowered gates into side of engine or train standing on crossing			1	0.09
Auto driven through lowered gates and struck by engine or train	2	7	9	0.77
Auto stalled on crossing and struck by train	4	2	82	7.03
Total accidents involving contact between train and auto	48	233	631	54.12
Auto driven through crossing gate - no contact with train		1	510	43.74
Auto driven into flashing light signals - no contact with train		5	25	2.14
Total accidents involving automobiles at grade crossings	48	239	1166	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED
1940

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENT	CASUALTY ACCIDENT	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	68	54	26	57	18.48
Passenger train - reverse movement		1		2	0.15
Freight train - normal movement	235	94	30	118	49.85
Freight train - reverse movement	12	1		2	1.97
Freight train - car ahead of engine	11	4		8	2.27
Switching movement - engine normal ahead of draft	46	13		17	8.94
Switching movement - engine reverse ahead of draft	5				0.76
Switching movement - engine pushing cars	20	7		10	4.09
Light engine - normal movement	45	15	4	26	9.09
Light engine - reverse movement	17	1		2	2.73
Motor track cars	3	2		5	0.76
Cars not attached	5	1		1	0.91
TOTAL	467	193	60	248	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1938, 1939 and 1940

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	546	1938	351*	0.64	3	6
	541	1939	328*	0.606	1	24
	539	1940	536*	0.994	3	18
Watchman	376	1938	34*	0.09	4	10
	371	1939	31*	0.084	2	19
	359	1940	38	0.106	3	11
Bell	155	1938	16	0.103		5
	147	1939	19	0.129	4	9
	144	1940	26	0.181	3	16
Visual Signals	1,082	1938	108*	0.099	6	39
	1,115	1939	131*	0.117	16	69
	1,132	1940	153*	0.135	9	39
Trainmen	**	1938	19	**		7
	1,409	1939	53	0.037		22
	1,421	1940	59	0.042		18

*Including accidents not involving contact with trains.
**No record kept of crossings protected by trainmen prior to 1939.

TABLE Q - [illegible] ACCIDENTS [illegible] AT GRADE CROSSINGS [illegible] 1938, 1939 [illegible]

CAUSE	YEAR	[illegible]	[illegible]	[illegible]
Gates not lowered in time to prevent accident	1938	3		1
	1939	10	1	[illegible]
	1940	[illegible]	1	[illegible]
Gates out of order	1938	1		
	1939			
	1940			
Persons passing under or around lowered gates	1938	2	1	-
	1939	9	3	5
	1940	4	2	1
Automobile driven through lowered gates striking or being struck by train	1938	13	3	6
	1939	10		[illegible]
	1940	10	1	[illegible]
Unassigned	1938	1		3
	1939			
	1940	4		

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1938, 1939 and 1940

TYPE OF PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1938	333	26.8	
	1939	301	9.6	
	1940	510		69.4
Flashing light signals struck and damaged	1938	23		64.3
	1939	31		34.8
	1940	25	19.4	

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS PROTECTED PART TIME BY WATCHMEN AND GATES -- 1931-1940

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1931	44	8	35
1932	49	3	50
1933	40	1	29
1934	45	7	33
1935	41	3	42
1936	30	2	30
1937	45	4	39
1938	31	1	26
1939	32		24
1940	46	4	13
TOTAL	403	33	321
AVERAGE	40.3	3.3	32.1

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENT OCCURRED
1940

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	278	109	33	138	58.64
Cloudy	88	41	10	56	19.55
Fog	19	11	7	15	4.54
Snow	44	17	6	21	9.24
Rain	38	15	4	18	8.03
TOTAL	467	193	60	248	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE
CROSSING ACCIDENTS OCCURRED
- 1940 -

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	37	13	1	22	7.58
1 - 5	167	35	2	46	30.61
6 - 10	83	32	5	53	17.42
11 - 20	87	40	11	69	19.24
21 - 30	46	35	16	31	12.27
31 - 40	23	17	7	16	6.06
41 - 50	14	14	13	8	4.24
51 - 60	2	2	1	2	0.61
61 - 70		2	2		0.30
Over 70	2	2	2		0.61
Not reported	6	1		1	1.06
TOTAL	467	193	60	248	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE
CROSSING ACCIDENTS OCCURRED
(Vehicles Only)
- 1940 -

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	287	120	33	163	63.69
Wet	57	17	3	26	11.58
Muddy	1				0.16
Snowy	70	23	6	33	14.55
Icy	43	9	4	10	8.14
Not Reported	9	3	2	5	1.88
TOTAL	467	172	48	237	100.00

AGE OF DRIVER OF VEHICLE INVOLVED
IN GRADE CROSSING ACCIDENTS - 194[illegible]

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	43	2	1[illegible]	[illegible]
21 - 30	177	11	[illegible]	[illegible]
31 - 40	82	7	[illegible]	[illegible]
41 - 50	59	7	1[illegible]	[illegible]
51 - 60	48	12	[illegible]	[illegible]
Over 60	20	5	[illegible]	[illegible]
Not Reported	210	4	[illegible]	[illegible]
TOTAL	639	48	237	[illegible]

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENTS - 194[illegible]

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	590	43	211	[illegible]
Female	37	5	2[illegible]	[illegible]
Not Reported	12		[illegible]	[illegible]
TOTAL	639	48	237	[illegible]

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE
CROSSING WHERE ACCIDENTS OCCURRED - 194[illegible]

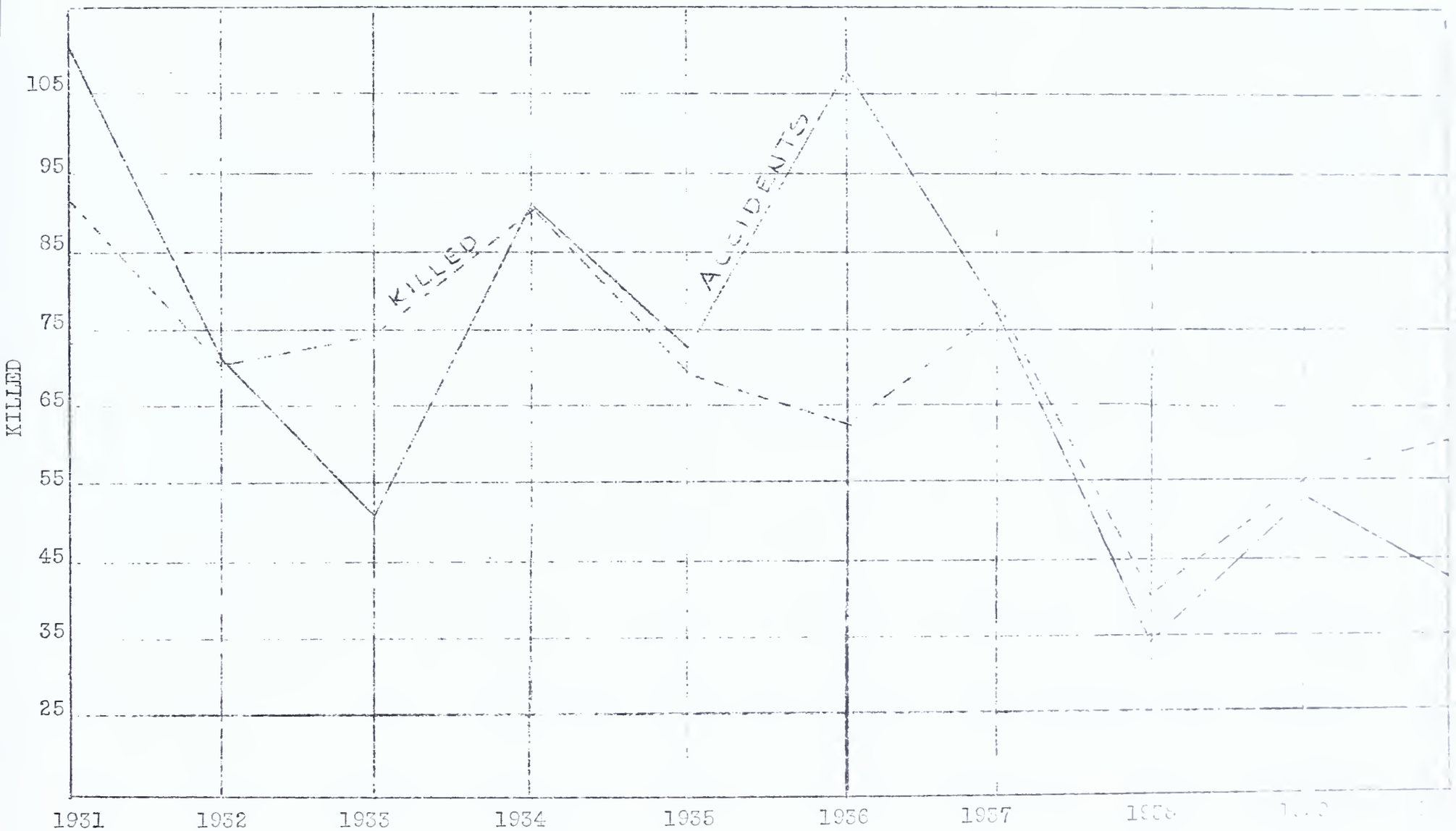
	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	488	34	1[illegible]	[illegible]
Not Familiar	43	5	27	[illegible]
Not Reported	108	9	43	[illegible]
TOTAL	639	48	237	[illegible]

TABLE Z
GRADE CROSSING ACCIDENTS COMPARED
WITH AUTOMOBILE REGISTRATIONS
1931 - 1940

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		AUTOMOBILES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1931	12,067	719	91	364	1,785,866	4.03
1932	12,251	556	70	330	1,705,967	3.26
1933	12,134	528	74	295	1,672,605	3.16
1934	11,992	640	90	384	1,736,951	3.68
1935	11,829	674	69	319	1,787,836	3.77
1936	11,764	669	62	378	1,913,193	3.50
1937	11,509	638	77	322	2,045,228	3.12
1938	11,667	459	40	277	2,035,667	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99

* Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE AA - CHART SHOWING CASUALTY ACCIDENTS
AND NUMBER OF FATALITIES AT GRADE CROSSINGS
OVER STEAM RAILROADS IN PENNSYLVANIA
1931 - 1940



DETAILED INFORMATION PERTAINING TO ACCIDENTS
INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		[illegible]	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I		
137	Collision with other vehicle		18		118				1	3	98			3	[illegible]		[illegible]
2	Collision with fixed object		1		1						4				[illegible]		[illegible]
42	Struck by taxicab				5			2	40				3	[illegible]	[illegible]		[illegible]
25	Running or walking into side of taxicab				3				26						[illegible]		[illegible]
32	Boarding or alighting (Standing Vehicle)				32										[illegible]		[illegible]
5	Falling within vehicle				5										[illegible]		1.1
19	Caught by vehicle doors				19										[illegible]		[illegible]
1	Jumping on or off vehicle in motion				1										1		.
49	Sudden stop of vehicle				55										[illegible]		11.[illegible]
1	Defect or failure of equipment				2										[illegible]		[illegible]
11	Vehicle skidded		1		3						10				14		[illegible]
9	Highway defect				11										11		[illegible]
	Apparent reckless operation of vehicle																
	Loading or unloading of cargo																
8	Miscellaneous				11						[illegible]				[illegible]		[illegible]
341	TOTAL		20		266			2	67	3	114		3	[illegible]	[illegible]		
	Per Cent Killed							40.0		60.0						1[illegible]	
	Per Cent Injured		4.2		56.6				14.3		24.3		.6				100.[illegible]

K - KILLED I - INJURED

TABLE II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
231	Collision with other vehicle		14		294				3	19	221			19	532	65.5	43.6
7	Collision with fixed object				12			1						1	12	3.5	1.0
57	Struck by auto-bus				11			7	28				14	7	53	24.1	4.3
23	Running or walking into side of auto-bus				1			1	18				4	1	23	3.5	1.9
233	Boarding or alighting (Standing vehicle)		2		231										233		19.1
84	Falling within vehicle		1		88										89		7.3
25	Caught by vehicle doors				25										25		2.1
4	Jumping on or off vehicle in motion			1			4							1	4	3.5	.3
75	Sudden stop of vehicle				82						1				83		6.8
10	Defect or failure of equipment		1		10								1		12		1.0
51	Vehicle skidded		6		60				2		39				107		8.8
10	Highway defect		2		9										11		.9
	Apparent reckless operation of vehicle																
	Loading or unloading of cargo																
33	Miscellaneous		4		25				2				4		35		2.9
843	TOTAL		30	1	848		4	9	53	19	261		23	29	1219		
	Per Cent Killed			3.5				31.0		65.5						100.0	
	Per Cent Injured		2.5		69.6		.3		4.3		21.4		1.9				100.0

K - KILLED I - INJURED

TABLE NO. III - ACCIDENTS INVOLVING GROUP AND PARTY SERVICE [illegible]
REGULATED MOTOR TRANSPORTATION

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES K	EMPLOYEES I	PASSENGERS K	PASSENGERS I	PEDESTRIANS K	PEDESTRIANS I	OCCUPANTS OF OTHER VEHICLES K	OCCUPANTS OF OTHER VEHICLES I	[illegible] K	[illegible] I	[illegible]	[illegible]
4	Collision with other vehicle		1		4			1	5			1	[illegible]
	Collision with fixed object												
	Struck by auto-bus, taxicab or truck												
	Running or walking into side of auto-bus, taxicab or truck												
7	Boarding or alighting (Standing Vehicle)				7							7	[illegible]
2	Falling within vehicle				2							2	[illegible]
	Caught by vehicle doors												
	Jumping on or off vehicle in motion												
1	Sudden stop of vehicle				1							1	[illegible]
1	Defect or failure of equipment				1							1	[illegible]
	Vehicle skidded												
	Highway defect												
	Apparent reckless operation of vehicle												
	Loading or unloading of cargo												
1	Miscellaneous				1							1	[illegible]
16	TOTAL		1		16			1	5			1	[illegible]
	Per cent Killed							100.0					100.0
	Per cent Injured		4.5		72.7				22.7				

K - Killed
I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
93	Collision with other vehicle		24							8	106	2	17	10	147	58.8	59.4
3	Collision with fixed object		1										3		4		1.6
23	Struck by auto-bus, taxicab or truck							3	13				7	3	20	17.7	8.1
13	Running or walking into side of auto-bus, taxicab or truck		1					3	7				2	3	10	17.6	4.1
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
1	Caught by vehicle doors		1												1		.4
4	Jumping on or off vehicle in motion						4								4		1.6
1	Sudden stop of vehicle		1												1		.4
4	Defect or failure of equipment		2						3	1	7			1	12	5.9	4.9
21	Vehicle skidded		5								22		4		31		12.6
1	Highway defect												1		1		.4
1	Apparent reckless operation of vehicle		1												1		.4
5	Loading or unloading of cargo		3										2		5		2.0
5	Miscellaneous		8								1		1		10		4.1
180	TOTAL		47				4	6	23	9	136	2	37	17	247		
	Per Cent Killed							35.3		52.9		11.8				100.0	
	Per Cent Injured		19.0				1.6		9.3		55.1		15.0				100.0

K - KILLED I - INJURED

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
24	Collision with other vehicle		5		8					1	48	1		2	61	8[illegible].0	84.6
3	Collision with fixed object	1	2											1	2	[illegible]	7.[illegible]
1	Struck by auto-bus, taxicab or truck												1		1		1.4
2	Running or walking into side of auto-bus, taxicab or truck							1	1					1	1	2[illegible]	1.4
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment										1				1		1.4
2	Vehicle skidded				1								1		2		2.[illegible]
1	Highway defect										1				1		1.4
	Apparent reckless operation of vehicle																
1	Loading or unloading of cargo												1		1		1.4
1	Miscellaneous		2												2		2.4
36	TOTAL	1	9		9			1	1	1	50	1	3	4	72		
	Per Cent Killed	25.0						25.0		25.0		25.0				1[illegible].[illegible]	
	Per Cent Injured		12.5		12.5				1.4		69.4		4.2				[illegible]

K - KILLED I - INJURED

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1938		17		246			1	96	2	91			3	450
1939		9		242	1		6	59		77	1	1	8	388
1940		20		266			2	67	3	114		3	5	470

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1938		18		639			4	58	9	204		1	13	920
1939	1	10	3	706		1	4	66	14	200	1	10	23	993
1940		30	1	848		4	9	53	19	261		23	29	1219

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1938		1		7			2	3	1	4			3	15
1939				21				1	1	1			1	23
1940		1		16					1	5			1	22

K - KILLED I - INJURED

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1938	4	80				8	5	41	4	161	3	35	16	325
1939	7	44				5	5	30	12	146	5	29	29	251
1940		47				4	6	23	9	136	2	37	17	247

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1938		8	1	6	1	1	2	15	5	37		4	9	71
1939		10	1	10			3	11	1	59		3	5	93
1940	1	9		9			1	1	1	50	1	3	4	72

K - Killed

I - Injured

Doc

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

1941

Record of Accidents Involving the Facilities or Operations of Transportation and Service Utilities and Contract Carriers

Harrisburg, Pennsylvania
March 25, 1942

P38.39
2.4

PENNSYLVANIA PUBLIC UTILITY COMMISSION
Bureau of Engineering

Harrisburg, Pennsylvania
March 25, 1942

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1941.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1941, the following number of utilities providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	67	Electric	72
Street Railways	17	Gas	146
Pipe Lines	6	Water	540
Ferries	16	Telephone	261
Express	1	Sewerage	13
Common Carriers by Water	7	Canal	3
Bus--Scheduled Service	290	Elevator	3
Taxi--Call and Demand	426	Wharfage	4
Bus--Group and Party	210	Bridge (Toll)	14
Truck--Common Carriers	9,603	Telegraph	4

Total - 11,703

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 1465 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $150 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Under the provisions of General Order 29, Revised, effective July 1, 1939, common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, while formerly, all accidents were to be reported, irrespective of the extent of injury resulting, or the amount of property damage involved.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

C. Radford Berry

C. Radford Berry
Director of Bureau

TABLE NO. INDEX OF TABLES PAGE

1 - Summary of Utility Accidents Involving Personal Injuries - 1
2 - Classification of Persons Killed and Injured in Utility Accidents - 1
3 - Casualty Accidents on Steam Railroads - 2
4 - Steam Railroad Non-Casualty Accidents - 3
5 - Three-Year Comparison of Non-Casualty Accidents on Steam Railroads - 3
6 - Three-Year Comparison of Persons Killed and Injured on Steam Railroads - 3
7 - Accidents to Employees of Steam Railroads in Pennsylvania - 4
8 - Ages of Enginemen, Firemen, Conductors, Brakemen and Flagmen Killed and Injured
in Train and Train Service Accidents - 5
9 - Accidents on Street Railways - 6
10 - Comparison of Persons Killed and Injured on Street Railways - 6
11 - Summary of Accidents Involving Regulated Transportation by Motor Vehicle - 7
12 - Summary of All Classes of Accidents Involving Regulated Motor Transportation - - - - - - - - - - - - - - - - - - - 8
13 - Three-Year Comparison of Casualty and Property Damage Accidents
Regulated Motor Transportation - 8
14 - Summary of Accidents Involving Service Utilities - 9
15 - Comparison of Persons Killed and Injured in Accidents Involving Service Utilities - - - - - - - - - - - - - - - - - 9
16 - Accidents Involving Electric Service Utilities - 10
17 - Comparison of Persons Killed and Injured in Accidents Involving Electric Service Utilities - - - - - - - - - - - 10
18 - Accidents Involving Gas Service Utilities - 11
19 - Comparison of Persons Killed and Injured in Accidents Involving Gas Service Utilities - - - - - - - - - - - - - 11
20 - Accidents Involving Water Service Utilities - 12
21 - Comparison of Persons Killed and Injured in Accidents Involving Water Service Utilities - - - - - - - - - - - - 12
22 - Accidents Involving Telephone and Telegraph Utilities - 13
23 - Comparison of Persons Killed and Injured in Accidents Involving Telephone and Telegraph Utilities - - - - - - 13
24 - Accidents Involving Other Utilities - 14
25 - Comparison of Persons Killed and Injured in Accidents Involving Other Service Utilities - - - - - - - - - - - - 14

APPENDIX

Grade Crossing Data

A - Protected and Unprotected Grade Crossings - 15
B - Types of Grade Crossing Protection - 15
C - Grade Crossing Accidents on Steam Railroads - 16
D - Persons Killed and Injured at Grade Crossings on Steam Railroads - 16
E - Casualties at Protected and Unprotected Grade Crossings (1939, 1940 and 1941) - - - - - - - - - - - - - - - - - 17
F - Character of Location Where Grade Crossing Accident Occurred (1939, 1940 and 1941) - - - - - - - - - - - - - - 18
G - Period of Day When Grade Crossing Accident Occurred (1939, 1940 and 1941) - - - - - - - - - - - - - - - - - - - 19

TABLE NO. INDEX (Cont'd) PAGE

H - Hour of Day When Grade Crossing Accident Occurred - 20
I - Day of Week When Grade Crossing Accident Occurred - 20
J - Month of Year When Grade Crossing Accident Occurred - 20
K - Character of Track Where Grade Crossing Accident Occurred (1939, 1940 and 1941) - - - - - - - - - - - - - 21
L - Casualties Resulting From Accidents Involving Contact with Trains (1939, 1940 and 1941) - - - - - - - - - 21
M - Accidents Involving Vehicles at Unprotected and Protected Public Grade Crossings Resulting in No Injuries to Persons (1939, 1940 and 1941) - 21
N - Detailed analysis of Casualties and Accidents Involving Automobiles at Grade Crossings - - - - - - - - - 22
O - Details of Train Movements where Grade Crossing Accidents Occurred - 22
P - Accidents and Casualties Involving Automobiles at Protected Grade Crossings (1939, 1940 and 1941) - - - 23
Q - Casualty and Non-Casualty Accidents Involving Contact With Trains at Grade Crossings Protected by Gates (1939, 1940 and 1941) - 23
R - Crossing Gates and Flashing Light Signals Struck and Damaged by Automobiles (No Contact with Engine or Train) (1939, 1940 and 1941) - 24
S - Accidents and Casualties Occurring During Time Crossings were Unprotected at Public Grade Crossings Protected Part Time by Watchman and Gates (1932 - 1941) - 24
T - Condition of Weather Where Grade Crossing Accident Occurred - 24
U - Speed of Trains Where Grade Crossing Accidents Occurred - 25
V - Road Conditions Where Grade Crossing Accidents Occurred - 25
W - Age of Driver of Vehicles Involved in Grade Crossing Accidents - 25
X - Sex of Driver of Vehicles Involved in Grade Crossing Accidents - 25
Y - Familiarity of Driver of Vehicles with Grade Crossing Where Accidents Occurred - - - - - - - - - - - - - 25
Z - Accidents and Casualties of Grade Crossing Accidents by Counties - 26
AA - Grade Crossing Accidents Compared with Automobile Registrations (1932 - 1941) - - - - - - - - - - - - - 27
BB - Chart Showing Casualty Accidents and Number of Fatalities at Grade Crossings over Steam Railroad Tracks in Pennsylvania (1932 - 1941) - 28

DETAILED INFORMATION PERTAINING TO ACCIDENTS
INVOLVING REGULATED MOTOR TRANSPORTATION

I - Accidents Involving Call & Demand Service in Regulated Motor Transportation - - - - - - - - - - - - - - - 29
II - Accidents Involving Schedule Bus Service in Regulated Motor Transportation - - - - - - - - - - - - - - - 30
III - Accidents Involving Group & Party Service in Regulated Motor Transportation - - - - - - - - - - - - - - 31
IV - Accidents Involving Freight and Merchandise Service in Regulated Motor Transportation - - - - - - - - - 32
V - Accidents Involving Contract Carrier Service in Regulated Motor Transportation - - - - - - - - - - - - - 33
VI - Comparison of Persons Killed and Injured in Accidents Involving Call & Demand Service - - - - - - - - - 34
VII - Comparison of Persons Killed and Injured in Accidents Involving Scheduled Bus Service - - - - - - - - - 34
VIII - Comparison of Persons Killed and Injured in Accidents Involving Group & Party Service - - - - - - - - - 34
IX - Comparison of Persons Killed and Injured in Accidents Involving Freight & Merchandise Service - - - - - 35
X - Comparison of Persons Killed and Injured in Accidents Involving Contract Carrier Service - - - - - - - 35

TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	2405	346	2363	24.48	67.05	21.33
Street Railway	4679	66	5387	47.62	12.79	48.62
Motor Transportation	1673	49	2266	17.03	9.50	20.45
Electric	536	37	510	5.45	7.17	4.60
Gas	191	13	211	1.94	2.52	1.90
Water	114	3	114	1.16	0.58	1.03
Telephone and Telegraph	192		194	1.95		1.75
Other Utilities	36	2	35	0.37	0.39	0.32
TOTAL	9826	516	11,080	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

K - Killed
I - Injured

	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	106	1577	4	232	7	135	16	469		143	1	106		159		35	134	[illegible]	[illegible]	[illegible]
Trespasser	160	86	7	31		3	2	4		1	2			1	1		172	[illegible]	[illegible]	[illegible]
Other	5	61		46		121	15	31	10	49		6		32	1		31	[illegible]	[illegible]	[illegible]
Passenger, Patron or Consumer	8	398	3	3369	2	1291	4	6	3	18		2		2			20	5088	3.	[illegible]
Pedestrian	11	11	31	471	21	229											63	711	[illegible]	[illegible]
Occupant Other Vehicle	56	230	21	1238	19	537											96	2055	18.60	[illegible]
TOTAL	346	2363	66	5387	49	2266	37	510	13	211	3	114		194	2	35	516	11,080		
Per Cent Killed	67.0		12.8		9.5		7.2		2.5		.6				.4				100.00	
PerCent Injured		21.3		48.6		20.5		4.6		1.9		1.0		1.8		.3				100.00

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		*OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
212	Grade crossings (for details see appendix)		7					67	241	67	248	19.36	10.50
27	Collisions	7	36		4					7	40	2.02	1.69
23	Derailments	6	32	4	120				1	10	153	2.89	6.48
109	At station or loading platforms				97				12		109		4.61
47	Defect or failure of roadway or equipment		42		4				2		48		2.03
44	Operating switches		44								44		1.86
78	Struck overhead or side obstruction	11	64				1	1	2	12	67	3.47	2.84
169	Repairing track or roadbed	1	166						3	1	169	0.29	7.15
35	Struck by flying missile, glass, etc.	1	26		8				1	1	35	0.29	1.48
81	Coupling or uncoupling	5	76							5	76	1.45	3.22
109	Falling on locomotive or car		65		35				9		109		4.61
233	Falling from locomotive or car	23	182	3	2	3	17	1	2	30	203	8.67	8.59
395	Getting on or off locomotive or car		290		96		7		4		397		16.80
317	Struck by locomotive or car	42	71	1	1	149	53	3	14	195	139	56.36	5.88
100	Operating hand brakes		100								100		4.23
165	Sudden starting or stopping of trains	6	153		10		1		6	6	170	1.73	7.19
7	Coming in contact with catenary wire	2				3	2			5	2	1.45	0.09
77	On or about locomotive		77								77		3.26
177	Miscellaneous	2	146		21	5	5		5	7	177	2.02	7.49
2405	TOTAL	106	1577	8	398	160	86	72	302	346	2363		
	Per Cent Killed	30.6		2.3		46.3		20.8				100.0	
	Per Cent Injured	66.8		16.8		3.6		12.8				100.0	

* "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed
I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $150 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE
COLLISIONS:				
MAIN TRACK	59			+43.90
YARD TRACK	414	473	32.55	+80.00
DERAILMENTS:				
MAIN TRACK	435			+31.42
YARD TRACK	284	719	49.49	+41.29
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		210	14.45	+17.32
MISCELLANEOUS		51	3.51	-10.53
TOTAL		1453	100.00	+39.85

Note: 436 of the 719 Derailments (60.6%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

STEAM RAILROADS
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS
(PROPERTY DAMAGE $150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR * DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE *
1939	774	+33.68	$ 905,217	[illegible]
1940	1039	+34.24	1,253,347	[illegible]
1941	1453	+39.85	1,651,190	[illegible]

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED 1939	KILLED 1940	KILLED 1941	% INCREASE OR DECREASE *	INJURED 1939	INJURED 1940	INJURED 1941	% INCREASE OR DECREASE *
EMPLOYEES	44	50	106	+112.00	751	950	1577	+ [illegible]
PASSENGERS	4	1	8	+700.00	198	349	398	+ [illegible]
TRESPASSERS	186	171	160	- 6.43	131	98	86	- [illegible]
OTHERS **	70	70	72	+ 2.86	386	287	302	+ [illegible]
TOTAL	304	292	346	+ 18.49	1466	1684	2363	+ [illegible]

* Comparison of 1941 with 1940
** Others consist chiefly of travellers on streets and highways

TABLE NO. 7

ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	5	42	4.72	2.66
Road Firemen	3	70	2.83	4.44
Road Conductors	3	119	2.83	7.55
Road Brakemen	19	262	17.93	16.61
Road Flagmen	1	23	0.94	1.46
Road Baggagemen		4		0.25
Yard Enginemen and Firemen	4	69	3.77	4.38
Yard Brakemen and Conductors	40	700	37.74	44.39
Yard Switch Tenders		6		0.38
Crossing Watchmen	1	4	0.94	0.25
Track Walkers	2		1.89	
Sectionmen and Work Train Laborers	10	186	9.44	11.80
Signalmen and Signal Maintainers	1	9	0.94	0.57
Station Baggagemen		1		0.06
Car Cleaners		5		0.32
Car Inspectors	3	6	2.83	0.38
Car Repairmen	1	6	0.94	0.38
Carpenters	1	10	0.94	0.63
Dining Car Employees		27		1.71
Miscellaneous	7	17	6.60	1.08
Employees Not on Duty	5	11	4.72	0.70
TOTAL	106	1577	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					4	5.48					7	[illegible]
21 - 30					5	6.85				7	51	[illegible]
31 - 40		2	4.26		18	24.66		3	2.46	2	53	[illegible]
41 - 50		4	8.51	1	22	31.50		29	23.77	5	75	[illegible]
51 - 60	4	23	57.45	2	17	26.03	3	54	46.72	3	40	15.30
61	1	1	4.23		1	1.37		7	5.74		4	1.[illegible]
62		2	4.26					3	2.46	2	4	2.14
63		2	4.25					4	3.28		2	.[illegible]
64		1	2.13					5	4.10		2	.71
65		3	6.38					1	.82			
Over 65		2	4.25					4	3.28		3	1.[illegible]
Not Reported		2	4.25		3	4.11		9	7.38		20	7.[illegible]
Total	5	42	100.00	3	70	100.00	3	119	100.00	19	262	100.00

Age	Road Flagmen			Yard Enginemen and Firemen			Yard Brakemen and Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					2	2.74	1	55	7.[illegible]	1	6[illegible]	[illegible]
21 - 30		2	8.33		14	19.18	9	228	31.75	15	29[illegible]	23.09
31 - 40	1	3	16.67	1	12	17.81	3	90	12.57	7	1[illegible]	[illegible]
41 - 50		5	20.83		23	31.50	11	151	21.89	17	310	[illegible]
51 - 60		8	33.33	3	10	17.81	8	113	16.35	23	26[illegible]	31.16
61							1	6	.95	2	19	1.54
62							2	5	.95	4	14	1.32
63		1	4.17					7	.95		15	1.18
64		2	8.33					3	.40		13	.[illegible]
65		1	4.17		1	1.37		1	.13		7	.82
Over 65		1	4.17		2	2.74	2	5	.95	2	17	1.40
Not Reported					5	6.85	3	38	5.54	3	77	5.[illegible]
Total	1	23	100.00	4	69	100.00	40	700	100.00	75	1285	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
84	Collision of cars		18		282			1	1					1	301	1.5	5.
1333	Collision of car and vehicle		27		444			18	1225		16		1	18	1713	27.3	31.
486	Struck by car	1	7	3	20	6	1			30	434		41	40	503	60.6	9.
41	Derailment of car		5		70				11				2		88		1.
20	Contact with overhead or side obst.				10		10								20		0.
4	Contact with trolley or feed wire or third rail		3		1										4		0.
92	Emergency stop		4		91										95		1.
62	Defect or failure of roadway or equip.		3		74										77		1.
266	Caught by doors				266										266		4.
280	Boarding standing car		4		280										284		5.
694	Alighting from car		15		684		4								703		13.
697	Falling within car		4		698										702		13.
21	Jumping on or off car while in motion		1		4		16								21		0.
293	At elevated or subway platforms		1		293										294		5.
99	Repair work on right of way	3	95		1						2			3	98	4.5	1.
91	Struck by flying missile, glass, etc.		8		84						3				95		1.
116	Miscellaneous		37		67	1		2	1	1	16		2	4	123	6.1	2.
4679	TOTAL	4	232	3	3369	7	31	21	1238	31	471		46	66	5387		
	Per Cent Killed	6.1		4.5		10.6		31.8		47.0						100.0	
	Per Cent Injured		4.3		62.5		0.6		23.0		8.7		0.9				100.

K - Killed
I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

	KILLED				INJURED			
	YEAR			COMPARISON OF 1941 WITH 1940	YEAR			COMPARISON OF 1941 WITH 1940
	1939	1940	1941		1939	1940	1941	
Employees		2	4	+100.00%	110	221	232	+ 4.98%
Passengers	2		3	+100.00%	1801	3000	3369	+ 12.30%
Trespassers	7	11	7	- 36.36%	71	68	31	- 54.41%
Occupants of other vehicles	17	13	21	+ 61.54%	601	1150	1238	+ 7.65%
Pedestrians	24	26	31	+ 19.23%	297	405	471	+ 16.30%
Others					66	38	46	+ 21.05%
TOTAL	50	52	66	+ 26.92%	2946	4882	5387	+ 10.34%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION [illegible]
(See Appendix - Tables I - X for details of casualty accidents)

S.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		[illegible]		[illegible]	
		K	I	K	I	K	I	K	I	K	I	K	I	[illegible]	[illegible]	[illegible]	[illegible]
3	Collision with other vehicle	3	80	1	492		1	1	0	15	503			[illegible]	[illegible]	[illegible]	[illegible]
2	Collision with fixed object		9		27								[illegible]		[illegible]		[illegible]
0	Struck by auto-bus, taxicab or truck		3	1	7		[illegible]	19	170		1		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	Running or walking into side of auto-bus, taxicab or truck				4			4	39				[illegible]		[illegible]		[illegible]
2	Boarding or alighting (Standing vehicle)		22		291										[illegible]		[illegible]
9	Falling within vehicle		1		119										[illegible]		[illegible]
7	Caught by vehicle doors				57												[illegible]
8	Jumping on or off vehicle in motion		1		5		2								[illegible]		[illegible]
3	Sudden stop of vehicle		2		153								1		[illegible]		[illegible]
5	Defect or failure of equipment	1	1		38						1			[illegible]	[illegible]	[illegible]	[illegible]
6	Vehicle skidded		6		37				0		17		1		[illegible]		[illegible]
7	Highway defect		1		6						1						[illegible]
4	Apparent reckless operation of vehicle	2	3		6				1	1	3			[illegible]	17	[illegible]	[illegible]
6	Miscellaneous	1	0		49				1		1		1	1	[illegible]	[illegible]	[illegible]
73	TOTAL	7	135	2	1291		3	24	229	16	587		21	19	[illegible]		
	Per Cent Killed	14.3		4.1				49.0		32.0						[illegible]	
	Per Cent Injured		6.0		57.0		0.1		10.1		25.9		[illegible]				[illegible]

K - Killed
I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	NUMBER OF ACCIDENTS (NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	426	394	7	582	66	$ 38,479.62
Schedule Route (Bus Service)	290	1,084	14	1,429	219	101,728.10
Group and Party (Bus Service)	210	18	2	17	17	1,910.59
Freight & Merchandise (Truck)	9,603	128	18	171	219	119,186.49
Contract Carrier (Persons and Property)	1,465	49	8	67	58	40,801.78
TOTAL	11,994	1,673	49	2,266	579	302,106.58

Note: See Appendix - Tables I - X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1939	19,184	6,226	-35.89%	66	+50.00%	1,751	- 1.68%	$274,006.82	- 2.22%
1940	14,302	2,307	-62.95%	56	-15.15%	2,030	+15.93%	229,730.17	-16.16%
1941	11,994	2,252	- 2.38%	49	-12.50%	2,266	+11.63%	302,106.58	+31.50%

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		[illegible]	
		K	I	K	I	K	I	K	I	K	I	[illegible]	[illegible]
69	Electric - Contact with charged wires or equipment	9	24	2	3	14	12	4	2	[illegible]	[illegible]	[illegible]	[illegible]
236	Falling - (other than into water)	2	208		2		23		3	[illegible]	[illegible]	[illegible]	[illegible]
79	Striking against or struck by objects		72				5		2	[illegible]	[illegible]	[illegible]	[illegible]
184	Handling materials	3	183							[illegible]	[illegible]	[illegible]	[illegible]
36	Defect or failure of equipment or machinery		24				31		5		60		[illegible]
151	Involving use of tools - no defect		150				2				[illegible]		[illegible]
93	Automobile accident	1	72			2	25			[illegible]	2	[illegible]	[illegible]
7	Failure to use protective devices provided		7								7		[illegible]
40	Burns - not from electric source	1	34				2		2	1	[illegible]	[illegible]	[illegible]
22	Explosion		8				6	1	12	1	[illegible]	[illegible]	[illegible]
6	Drowning	1	1	2		1	1			4	2	[illegible]	[illegible]
13	Asphyxiation		4			2		2	1	11	5	[illegible]	[illegible]
62	Infection from minor wounds		62								62		[illegible]
77	Miscellaneous		63	1	1		10		2	1	76	[illegible]	[illegible]
1069	TOTAL	17	912	5	0	20	118	7	[illegible]	[illegible]	[illegible]		
	Per Cent Killed	30.9		9.1		47.3		12.7				[illegible]	
	Per Cent Injured		85.7		0.6		11.1		2.6				[illegible]

K - Killed
I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1941 WITH 1940	YEAR			COMPARISON OF [illegible] WITH [illegible]
	1939	1940	1941		1939	1940	1941	
EMPLOYEES	20	9	17	+88.89	871	848	[illegible]	+ [illegible]
TRESPASSERS	9	9	5	-44.44	15	9	0	[illegible]
OTHERS	16	24	26	+ 8.33	147	110	118	+ 7.27
PATRONS OR CONSUMERS	8	16	7	-56.25	85	74	28	[illegible]
TOTAL	53	58	55	- 5.17	1118	1041	1064	[illegible]

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
62	Electric - Contact with charged wires or equipment	9	23	2	3	14	12	4	1	29	39	78.4	7.7
118	Falling - (other than into water)	1	110				7			1	117	2.7	22.9
31	Striking against or struck by objects		30				1				31		6.1
109	Handling materials	3	107							3	107	8.1	21.0
13	Defect or failure of equipment or machinery		11				1		4		16		3.1
76	Involving use of tools - no defect		75				1				76		14.9
30	Automobile accident	1	26				4			1	30	2.7	5.9
4	Failure to use protective devices provided		4								4		0.8
15	Burns - not from electric source	1	14							1	14	2.7	2.7
3	Explosion		3								3		0.6
3	Drowning	1				1	1			2	1	5.4	0.2
	Asphyxiation												
29	Infection from minor wounds		29								29		5.7
43	Miscellaneous		37		1		4		1		43		8.4
536	TOTAL	16	469	2	4	15	31	4	6	37	510		
	Per Cent Killed	43.2		5.4		40.6		10.8				100.0	
	Per Cent Injured		91.9		0.8		6.1		1.2				100.0

K - Killed
I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1939	12	349	2	10	13	37	-	5	27	401
1940	7	427	5	5	22	46	4	2	38	480
1941	16	469	2	4	15	31	4	6	37	510

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wire or equipment												
32	Falling - (other than into water)		23		1		6		2		32		[illegible]
13	Striking against or struck by objects		13								13		[illegible]
23	Handling materials		23								23		[illegible]
13	Defect or failure of equipment or machinery		5				28		1		3		[illegible]
28	Involving use of tools - no defect		28								28		[illegible]
16	Automobile accident		13			1	7			1	20	7.7	[illegible]
2	Failure to use protective devices provided		2								2		[illegible]
20	Burns - not from electric source		15				3		2		20		[illegible]
15	Explosion		1				5	1	12	1	18	[illegible]	[illegible]
1	Drowning		1								1		[illegible]
13	Asphyxiation		4			9		2	1	11	[illegible]	[illegible]	[illegible]
9	Infection from minor wounds		9								9		[illegible]
6	Miscellaneous		6								6		[illegible]
191	TOTAL		143		1	10	49	3	18	13	211		
	Per Cent Killed					76.9		23.1				100.0	
	Per Cent Injured		67.8		0.5		23.2		8.5				[illegible]

K - Killed
I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1939	1	172	-	1	2	31	8	78	11	282
1940	1	126	-	2	1	30	12	69	14	227
1941	-	143	-	1	10	49	3	18	13	211

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
17	Falling - (other than into water)	1	15				1			1	16	33.3	14.0
10	Striking against or struck by objects		8				1		1		10		8.8
26	Handling materials		27								27		23.7
4	Defect or failure of equipment or machinery		4								4		3.5
25	Involving use of tools - no defect		25				1				26		22.8
6	Automobile accident		3				3				6		5.3
	Failure to use protective devices provided												
2	Burns - not from electric source		2								2		1.7
3	Explosion		4								4		3.5
1	Drowning			1						1		33.3	
	Asphyxiation												
12	Infection from minor wounds		12								12		10.5
8	Miscellaneous		6	1					1	1	7	33.3	6.2
114	TOTAL	1	106	2			6		2	3	114		
	Per Cent Killed	33.3		66.7								100.0	
	Per Cent Injured		93.0				5.3		1.7				100.0

K - Killed
I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1939	1	178	1	-	-	4	-	-	2	182
1940	1	127	1	-	1	5	-	-	3	132
1941	1	106	2	-	-	6	-	2	3	114

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Electric - Contact with charged wires or equipment		1								1		.6
63	Falling - (other than into water)		54		1		9		1		65		33.9
24	Striking against or struck by objects		20				2		1		23		12.0
20	Handling materials		20								20		10.4
5	Defect or failure of equipment or machinery		3				2				5		2.6
16	Involving use of tools - no defect		16								16		8.3
38	Automobile accident		27				11				38		19.8
	Failure to use protective devices provided												
3	Burns - not from electric source		3								3		1.6
1	Explosion						1				1		.5
	Drowning												
	Asphyxiation												
8	Infection from minor wounds		8								8		4.2
13	Miscellaneous		7				6				13		6.8
192	TOTAL		159		1		32		2		192		
	Per Cent Killed												
	Per Cent Injured		82.0		0.5		16.5		1.0				100.0

K - Killed
I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1939	5	142	-	1	1	45	-	2	6	190
1940	-	144	-	1	-	25	-	3	-	173
1941	-	159	-	1	-	32	-	2	-	194

TABLE NO. 24 - ACCIDENTS INVOLVING*OTHER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
6	Falling - (other than into water		6								6		17.1
1	Striking against or struck by objects		1								1		2.9
6	Handling materials		6								6		17.1
1	Defect or failure of equipment or machinery		1								1		2.9
6	Involving use of tools - no defect		6								6		17.1
3	Automobile accident		3			1				1	3	50.0	8.6
1	Failure to use protective devices provided		1								1		2.9
	Burns - not from electric source												
	Explosion												
1	Drowning			1						1		50.0	
	Asphyxiation												
4	Infection from minor wounds		4								4		11.4
7	Miscellaneous		7								7		20.0
36	TOTAL		35	1		1				2	35		
	Per Cent Killed			50.0		50.0						100.0	
	Per Cent Injured		100.0										100.0

K - Killed
I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING *OTHER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1939	1	30	6	3	-	30	-	-	7	63
1940	-	24	3	1	-	4	-	-	3	29
1941	-	35	1	-	1	-	-	-	2	35

* Other utilities as herein used consist of: Bridge, Canal, Express, Ferry, Pipe Line and Sewerage.

APPENDIX
- 1941 -

DETAILED INFORMATION PERTAINING TO
ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2166	19.10
Protected by trainmen	1442	12.71
Total Protected	3608	31.81
Unprotected	7735	68.19
TOTAL CROSSINGS	11,343	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	520	14.4
Watchmen	349	9.6
Flashing light signals	1,126	31.2
Other visual signals	31	0.9
Bells	140	3.9
Trainmen	1,442	40.0
TOTAL	3,608	100.0

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	275	80		5		1	275	86	361	49.18
Protected by gates	25	11		5			25	16	41	5.59
Protected by watchmen	37	6		4			37	10	47	6.40
Protected by bells	8	8			1		9	8	17	2.32
Protected by visual signals	143	31		6			143	37	180	24.52
Protected by trainmen	60	25		2		1	60	28	88	11.99
Total Accidents at Protected Crossings	273	81		17	1	1	274	99	373	50.82
Total Accidents - Non-Casualty	548				1		549			74.80
Total Accidents - Casualty		161		22		2		185		25.20
TOTAL ACCIDENTS	709		22		3				734	100.00
Per Cent of Total Accidents	96.59		3.00		0.41				100.00	

NC - Non-Casualty
C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K and I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	34	93	3	2		1	37	96	133	47.67
Protected by gates	1	17	4	1			5	18	23	8.24
Protected by watchmen	1	8	1	3			2	11	13	4.66
Protected by bells	5	9					5	9	14	5.02
Protected by visual signals	8	48	3	3			11	51	62	22.22
Protected by trainmen		31		2		1		34	34	12.19
TOTAL	49	206	11	11		2	60	219	279	100.00
Killed and injured at protected crossings	15	113	8	9		1	23	123	146	52.33
Per Cent of total killed and injured	91.40		7.88		0.72					100.00

K - Killed
I - Injured

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1939, 1940 and 1941

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1939	2174	35		
	1940	2174	26	25.7	
	1941	2166	23	11.5	
UNPROTECTED	1939	9355	20		5.3
	1940	9237	34		70.0
	1941	9177	37		8.8
			INJURED		
*PROTECTED	1939	2174	128		50.[illegible]
	1940	2174	105	18.0	
	1941	2166	123		17.1
UNPROTECTED	1939	9355	152	20.8	
	1940	9237	143	5.9	
	1941	9177	96	32.9	

*Not including those protected by trainmen

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENT OCCURRED
1939, 1940 AND 1941

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	UNPROTECTED	1939	137	- 1.4%	8	+ 60.0%	76	- 18.3%
		1940	168	+ 22.6%	11	+ 37.5%	56	- 26.3%
		1941	157	- 6.5%	7	- 36.4%	39	- 30.4%
	PROTECTED	1939	175	+ 25.0%	19	+ 18.8%	86	+ 53.6%
		1940	192	+ 9.7%	20	+ 5.3%	68	- 20.9%
		1941	260	+ 35.4%	16	- 20.0%	76	+ 11.8%
RURAL	UNPROTECTED	1939	145	+ 11.5%	12	- 14.3%	76	- 23.2%
		1940	196	+ 35.2%	23	+ 91.7%	87	+ 14.5%
		1941	204	+ 4.1%	30	+ 30.4%	57	- 34.5%
	PROTECTED	1939	72	+ 44.0%	16	+220.0%	42	+ 44.8%
		1940	104	+ 44.4%	6	- 62.5%	37	- 11.9%
		1941	113	+ 8.7%	7	+ 16.7%	47	+ 27.0%

* Cities or boroughs with population over 2,500.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED
1939, 1940 and 1941

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1939	238		.2
	1940	293		23.1
	1941	310		5.8
		PERSONS KILLED		
	1939	28		33.3
	1940	32		14.3
	1941	32		
		PERSONS INJURED		
	1939	124		0.8
	1940	96	22.6	
	1941	72	25.0	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1939	291		20.7
	1940	367		26.1
	1941	424		15.5
		PERSONS KILLED		
	1939	27		22.7
	1940	28		3.7
	1941	28		
		PERSONS INJURED		
	1939	156		1.3
	1940	152	2.6	
	1941	147	3.3	

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	43	5.86		14
1 to 1:59 a.m.	33	4.50	3	12
2 to 2:59 a.m.	31	4.22	1	13
3 to 3:59 a.m.	31	4.22	6	11
4 to 4:59 a.m.	19	2.59		14
5 to 5:59 a.m.	14	1.91	1	5
6 to 6:59 a.m.	21	2.86		4
7 to 7:59 a.m.	29	3.95	5	10
8 to 8:59 a.m.	20	2.73		2
9 to 9:59 a.m.	23	3.13	5	1
10 to 10:59 a.m.	27	3.68	2	2
11 to 11:59 a.m.	23	3.13	5	3
Noon to 12:59 p.m.	27	3.68	1	13
1 to 1:59 p.m.	35	4.77	1	6
2 to 2:59 p.m.	21	2.86	1	4
3 to 3:59 p.m.	27	3.68	1	12
4 to 4:59 p.m.	29	3.95	4	7
5 to 5:59 p.m.	37	5.04	2	14
6 to 6:59 p.m.	32	4.36	3	15
7 to 7:59 p.m.	51	6.95	6	20
8 to 8:59 p.m.	42	5.72	1	5
9 to 9:59 p.m.	31	4.22	3	7
10 to 10:59 p.m.	38	5.18	3	8
11 to 11:59 p.m.	50	6.81	6	17
TOTAL	734	100.00	60	219

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENT OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	82	11.17	5	23
Monday	89	12.13	4	26
Tuesday	108	14.71	10	31
Wednesday	82	11.17	9	25
Thursday	114	15.53	17	38
Friday	110	14.99	4	37
Saturday	149	20.30	11	39
TOTAL	734	100.00	60	219

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENT OCCURRE

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	86	11.72	8	22
February	86	11.72	9	19
March	62	8.45	1	11
April	39	5.30	6	11
May	53	7.22	1	17
June	35	4.77	2	12
July	32	4.36	8	5
August	48	6.54	3	16
September	60	8.17	3	20
October	72	9.81	9	28
November	83	11.31	6	36
December	78	10.63	4	22
TOTAL	734	100.00	60	219

TABLE K - CHARACTER OF TRACK WHERE
GRADE CROSSING ACCIDENT OCCURRED
1939, 1940 AND 1941

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1939	492	55	260
	1940	559	60	225
	1941	638	58	190
Public Siding	1939	27		11
	1940	62		10
	1941	68	2	21
Private Siding	1939	10		9
	1940	39		13
	1941	28		8
Private Grade Crossing (Private Road)	1939	65	8	30
	1940	77	6	20
	1941	83	7	29

TABLE L - CASUALTIES RESULTING FROM
ACCIDENTS INVOLVING CONTACT WITH TRAINS
1939, 1940 AND 1941

CONTACT BETWEEN TRAIN AND -	YEAR	NUMBER OF ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1939	172	39	206
	1940	170	14	233
	1941	161	19	200
Pedestrians	1939	23	15	10
	1940	21	12	11
	1941	22	11	11
Streetcars, Autobuses, Taxicabs	1939	1		2
	1940	1		3
	1941	1		1
Bicycles, Motorcycles, Wagons	1939	3	1	2
	1940	1		1
	1941	1		1

TABLE M - ACCIDENTS INVOLVING VEHICLES AT
UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS
RESULTING IN NO INJURIES TO PERSONS
1939, 1940 AND 1941

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Unprotected	1939	174		18.4
	1940	253		45.4
	1941	275		8.7
Protected	1939	144		15.4
	1940	214		48.6
	1941	274		28.0

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENTS	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
Auto struck by train	43	113	334	27.00
Auto driven into side of engine or train moving over crossing	5	69	214	17.30
Auto driven into side of engine or train standing on crossing		15	39	3.15
Auto driven through lowered gates into side of engine or train moving over crossing		2	12	0.97
Auto driven through lowered gates into side of engine or train standing on the crossing			1	0.08
Auto driven through lowered gates and struck by engine or train	1	1	3	0.24
Auto stalled on crossing and struck by train		6	106	8.57
Total accidents involving contact between train and auto	49	206	709	57.32
Auto driven through crossing gate - no contact with train		1	500	40.42
Auto driven into flashing light signals - no contact with train		3	28	2.27
Total accidents involving automobiles at grade crossings	49	210	1237	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENT	CASUALTY ACCIDENT	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	85	40	27	41	17.03
Passenger train - reverse movement	2				0.27
Freight train - normal movement	293	92	24	108	52.45
Freight train - reverse movement	10	3	2	3	1.77
Freight train - car ahead of engine	15	7	4	10	3.00
Switching movement - engine normal ahead of draft	37	10	2	11	6.40
Switching movement - engine reverse ahead of draft	9	2		3	1.50
Switching movement - engine pushing cars	18	7		8	3.41
Light engine - normal movement	53	15	1	16	9.26
Light engine - reverse movement	17	4		5	2.86
Motor track cars	7	2		5	1.23
Cars not attached	3	3		9	0.82
TOTAL	549	185	60	219	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1939, 1940 and 1941

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	541	1939	328*	0.606	1	24
	539	1940	536*	0.994	3	18
	520	1941	541*	1.040	5	19
Watchman	371	1939	31	0.084	2	19
	359	1940	38	0.106	3	11
	349	1941	47	0.135	2	11
Bells	147	1939	19	0.129	4	9
	144	1940	26	0.181	3	16
	140	1941	17	0.121	5	9
Visual Signals	1,115	1939	131*	0.117	16	69
	1,132	1940	153*	0.135	9	39
	1,157	1941	208*	0.180	11	54
Trainmen	1,409	1939	53	0.037		22
	1,421	1940	59	0.042		18
	1,442	1941	88	0.061		34

*Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES 1939, 1940 and 1941

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1939	10	1	[illegible]
	1940	[illegible]	1	11
	1941	9		[illegible]
Gates out of order	1939			
	1940			
	1941	3		[illegible]
Persons passing under or around lowered gates	1939	8	3	[illegible]
	1940	4	3	1
	1941	5	4	1
Automobile driven through lowered gates striking or being struck by train	1939	13		3
	1940	18	2	9
	1941	13	1	5
Unassigned	1939			
	1940	4		
	1941	8		

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1939, 1940 and 1941

TYPE OF PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1939	301		
	1940	510	9.6	69.4
	1941	500	2.0	
Flashing light signals struck and damaged	1939	31		
	1940	25	19.4	34.8
	1941	28		12.0

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS PROTECTED PART TIME BY WATCHMEN AND GATES -- 1932-1941

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1932	49	3	50
1933	40	1	29
1934	45	7	33
1935	41	3	42
1936	30	2	30
1937	45	4	39
1938	31	1	26
1939	32		24
1940	46	4	13
1941	42	2	20

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENT OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	354	124	43	149	65.12
Cloudy	83	17	7	18	13.62
Fog	18	7	1	8	3.41
Snow	44	21	6	25	8.86
Rain	50	16	3	19	8.99
TOTAL	549	185	60	219	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE
CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
tanding	28	11		15	5.31
- 5	184	52	5	69	32.15
- 10	114	26	7	44	19.07
- 20	100	48	19	43	20.16
- 30	51	24	10	26	10.22
- 40	48	11	4	12	8.04
- 50	11	3	1	3	1.91
- 60	5	5	7	2	1.36
- 70	1				0.14
ver 70	2	2	6		0.55
t Reported.	5	3	1	5	1.09
TOTAL	549	185	60	219	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE
CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
y	400	124	40	161	73.80
t	46	20	6	24	9.30
ddy	1				0.14
owy	63	14	3	16	10.85
y	38	4		6	5.91
t Reported					
TOTAL	548	162	49	207	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	82	11	30	11.55
21 - 30	163	18	53	22.96
31 - 40	89	2	30	12.54
41 - 50	53	2	20	7.46
51 - 60	26	1	7	3.66
Over 60	19	6	16	2.68
Not Reported	278	9	31	39.15
TOTAL	710	49	207	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	356	44	194	82.39
Female	35	3	13	4.93
Not Reported	19	2		2.68
TOTAL	710	49	207	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE
CROSSING WHERE ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	543	40	165	76.48
Not Familiar	42		11	5.92
Not Reported	125	9	31	17.60
TOTAL	710	49	207	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	6		2	0.82
Allegheny	104	10	29	14.17
Armstrong	6		2	0.82
Beaver	3		3	0.41
Bedford	2			0.27
Berks	12		1	1.64
Blair	10	2		1.36
Bradford	3	1		0.41
Bucks	4		4	0.55
Butler	11	1	4	1.50
Cambria	21	1	4	2.86
Cameron				
Carbon	3			0.41
Centre	6	4	2	0.82
Chester	10	2	4	1.36
Clarion	3		1	0.41
Clearfield	21		1	2.86
Clinton	4			0.54
Columbia	3			0.41
Crawford	13	1	4	1.77
Cumberland	15		6	2.04
Dauphin	7			0.95
Delaware	12		3	1.64
Elk	8		4	1.09
Erie	35	2	12	4.77
Fayette	26	2	7	3.54
Forest	1			0.14
Franklin	4		2	0.55
Fulton				
Green	1			0.14
Huntingdon	3		1	0.41
Indiana	10	1		1.36
Jefferson	7		1	0.95
Juniata				
Lackawanna	17		6	2.32

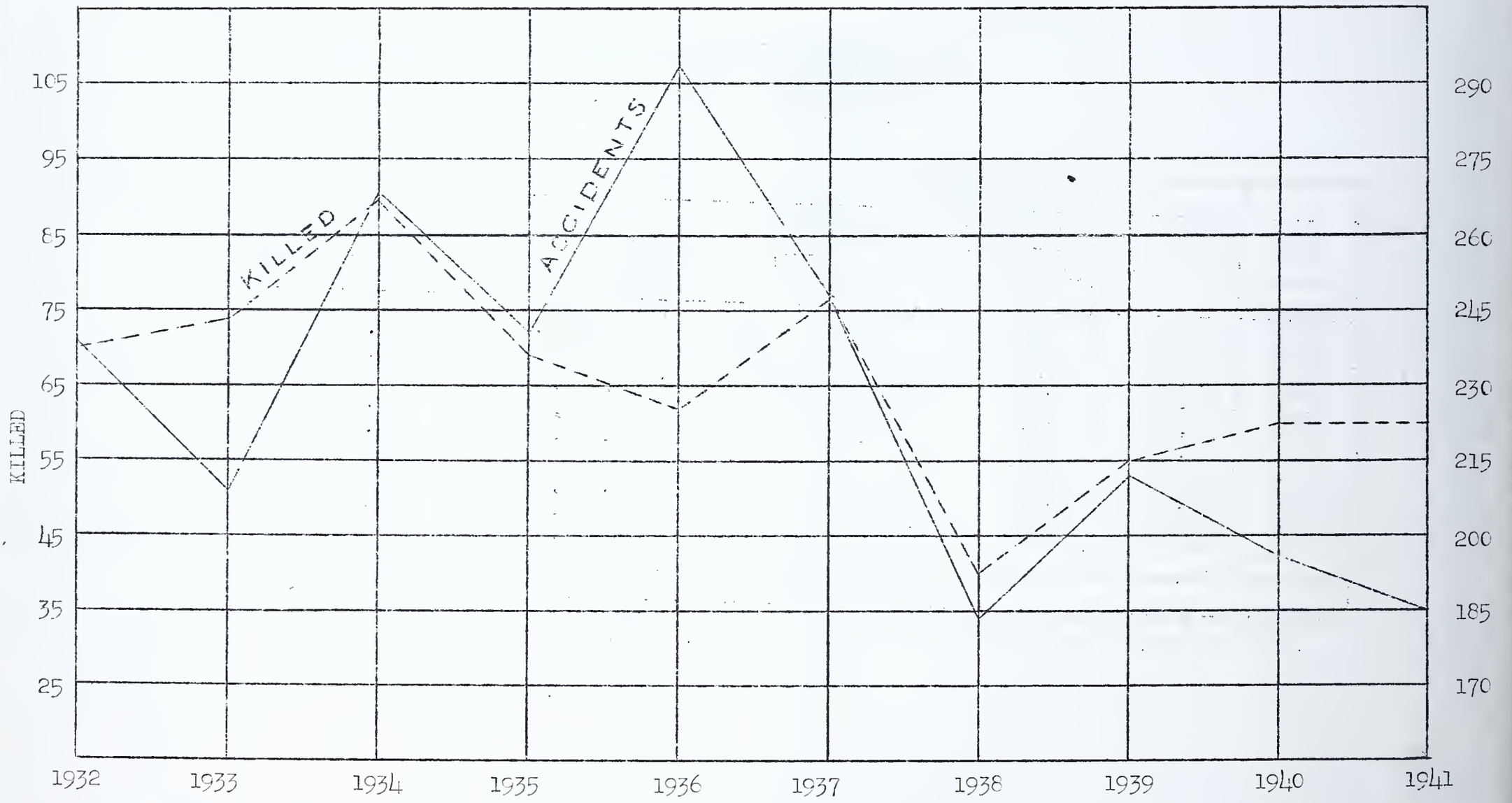
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lancaster	9	6		1.23
Lawrence	12		3	1.64
Lebanon	8	1	1	1.09
Lehigh	7		2	0.95
Luzerne	32	3	19	4.36
Lycoming	6	1	1	0.82
McKean	7			0.95
Mercer	40	5	13	5.45
Mifflin	5		2	0.68
Monroe	2			0.27
Montgomery	24	3	6	3.27
Montour	4		4	0.54
Northampton	7		4	0.95
Numberland	26	2	5	3.54
Perry				
Philadelphia	26		14	3.54
Pike	1			0.14
Potter				
Schuylkill	24	1	11	3.27
Snyder	2			0.27
Somerset	10	2		1.36
Sullivan				
Susquehanna	3			0.41
Tioga	3		3	0.41
Union	4			0.54
Venango	5		2	0.68
Warren	7	3	2	0.95
Washington	15		6	2.04
Wayne				
Westmoreland	37	5	13	5.04
Wyoming	3		1	0.41
York	14	1	4	1.91
TOTAL	734	60	219	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH AUTOMOBILE REGISTRATIONS
1932 - 1941

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		AUTOMOBILES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1932	12,251	556	70	330	1,705,967	3.26
1933	12,134	528	74	295	1,672,605	3.16
1934	11,992	640	90	384	1,736,951	3.68
1935	11,829	674	69	319	1,787,836	3.77
1936	11,764	669	62	378	1,913,193	3.50
1937	11,509	638	77	322	2,045,228	3.12
1938	11,667	459	40	277	2,035,667	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,362	3.12

* Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles. (Not including trailer registrations)

TABLE 8B - CHART SHOWING CASUALTY ACCIDENTS
AND NUMBER OF FATALITES AT GRADE CROSSINGS
OVER STEAM RAILROADS IN PENNSYLVANIA
1932 - 1941



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
196	Collision with other vehicle		43	1	203						118			1	364	14.3	62.5
1	Collision with fixed object				1										1		0.2
55	Struck by taxicab				4			6	56					6	60	85.7	10.3
13	Running or walking into side of taxicab				3				12						15		2.6
19	Boarding or alighting (Standing Vehicle)				19										19		3.3
10	Falling within vehicle		1		9										10		1.7
29	Caught by vehicle doors				29										29		5.0
2	Jumping on or off vehicle in motion				2										2		0.3
48	Sudden stop of vehicle				55										55		9.4
3	Defect or failure of equipment				3										3		0.5
9	Vehicle Skidded		1		7				3		3				14		2.4
1	Highway defect				1										1		0.2
2	Apparent reckless operation of vehicle				3										3		0.5
6	Miscellaneous		1		5										6		1.0
394	TOTAL		46	1	344			6	71		121			7	582		
	Per Cent Killed			14.3				85.7								100.0	
	Per Cent Injured		7.9		59.1				12.2		20.8						100.0

K - KILLED I - INJURED

TABLE II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
329	Collision with other vehicle		20		284				4	6	301			6	609	42.9	42.6
14	Collision with fixed object		4		26										30		2.1
102	Struck by auto-bus		1	1	3			6	96		1			7	101	50.0	7.1
20	Running or walking into side of auto-bus				1				19						20		1.4
286	Boarding or alighting (Standing vehicle)		22		265										287		20.1
108	Falling within vehicle				109										109		7.6
28	Caught by vehicle doors				28										28		2.0
4	Jumping on or off vehicle in motion		1		3										4		0.3
82	Sudden stop of vehicle				95								1		96		6.7
28	Defect or failure of equipment				34										34		2.4
28	Vehicle skidded		1		29				3		6		14		53		3.7
5	Highway defect		1		5										6		0.4
4	Apparent reckless operation of vehicle				3					1				1	3	7.1	0.2
46	Miscellaneous		4		43				1		1				49		3.4
1084	TOTAL		54	1	928			6	123	7	309		15	14	1429		
	Per Cent Killed			7.1				42.9		50.0						100.0	
	Per Cent Injured		3.8		65.0				8.6		21.6		1.0				100.0

K - KILLED I - INJURED

TABLE III - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHERS VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
3	Collision with other vehicle				2						1				3		17.6
	Collision with fixed object																
3	Struck by taxicab, autobus or truck							2	1					2	1	100.0	5.9
	Running or walking into side of taxicab, autobus or truck																
7	Boarding or alighting (Standing vehicle)				7										7		41.2
1	Falling within vehicle				1										1		5.9
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
2	Sudden stop of vehicle				3										3		17.6
1	Defect or failure of equipment				1										1		5.9
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
1	Miscellaneous				1										1		5.9
18	TOTAL				15			2	1		1			2	17		
	Per Cent Killed							100.0								100.0	
	Per Cent Injured				88.2				5.9		5.9						100.0

K - KILLED I - INJURED

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
80	Collision with other vehicle	3	13		3		1	1	1	9	103			13	121	72.2	70.8
6	Collision with fixed object		4										4		8		4.7
19	Struck by taxicab, autobus or truck		2					3	13				1	3	16	16.6	9.3
3	Running or walking into side of taxicab, autobus or truck								3						3		1.7
	Boarding or alighting (Standing Vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
2	Jumping on or off vehicle in motion						2								2		1.2
	Sudden stop of vehicle																
3	Defect or failure of equipment	1	1								1			1	2	5.6	1.2
6	Vehicle Skidded		2		1						7				10		5.8
1	Highway defect										1				1		0.6
6	Apparent reckless operation of vehicle	1	3								3			1	6	5.6	3.5
2	Miscellaneous		1										1		2		1.2
128	TOTAL	5	26		4		3	4	17	9	115		6	18	171		
	Per Cent Killed	27.8						22.2		50.0						100.0	
	Per Cent Injured		15.2		2.4		1.7		9.9		67.3		3.5				100.0

K - Killed
I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		THIRD-PASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
25	Collision with other vehicle		4						1		40				45		7.2
1	Collision with fixed object		1												1		[illegible]
11	Struck by taxicab, autobus or truck							2	10					2	10	[illegible]	14.9
5	Running or walking into side of taxicab, autobus or truck							4	5					4	5	50.0	7.4
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
1	Sudden stop of vehicle		2												2		[illegible]
	Defect or failure of equipment																
3	Vehicle skidded		2								1				3		[illegible]
	Highway defect																
2	Apparent reckless operation of vehicle	1							1					1	1	12.5	1.5
1	Miscellaneous	1												1		12.5	
49	TOTAL	2	9					6	17		41			8	67		
	Per Cent Killed	25.0						75.0								100.0	
	Per Cent Injured		13.4						25.4		61.2						100.0

K - KILLED I - INJURED

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1939		9		242	1		6	59		77	1	1	8	388
1940		20		266			2	67	3	114		3	5	470
1941		46	1	344			6	71		121			7	582

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1939	1	10	3	706		1	4	66	14	200	1	10	23	993
1940		30	1	848		4	9	53	19	261		23	29	1219
1941		54	1	928			6	123	7	309		15	14	1429

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1939				21				1	1	1			1	23
1940		1		16					1	5			1	22
1941				15			2	1		1			2	17

K - KILLED I - INJURED

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1939	7	44				5	5	30	12	146	5	29	29	254
1940		47				4	6	23	9	136	2	37	17	247
1941	5	26		4		3	4	17	9	115		6	18	171

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1939		10	1	10			3	11	1	59		3	5	93
1940	1	9		9			1	1	1	50	1	3	4	72
1941	2	9					6	17		41			8	67

K - Killed

I - Injured

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

1942

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
June 1, 1943

P38.39
24

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

Harrisburg, Pennsylvania
June 1, 1943

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1942.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1942, the following number of utilities providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	73	Gas	144
Street Railways	13	Water	519
Pipe Lines	8	Telephone	249
Ferries	16	Sewerage	13
Express	1	Canal	3
Common Carriers by Water	7	Wharfage	3
Bus--Scheduled Service	313	Bridge (Toll)	13
Taxi--Call and Demand	401	Telegraph	4
Bus--Group and Party	218	Steam heat	31
Truck--Common Carriers	9,530	Stock Yards	2
Electric	71	Airways	8

Total - 11,640

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 1352 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $150 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Reference to the following pages will show that there has been a substantial increase in casualty accidents involving transportation utilities in the year 1942, while service utilities (electric, gas, water companies, etc.) reported a decrease in casualty accidents. The increase in accidents involving transportation companies was undoubtedly due to the increased operation of trains, trucks, buses and street railway cars required by reason of the war effort.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

C. Radford Berry

C. Radford Berry
Director of Bureau

Table No. INDEX OF TABLES Page

1 - Summary of Utility Accidents Involving Personal Injuries ---------- 1
2 - Classification of Persons Killed and Injured in Utility Accidents ---------- 1
3 - Casualty Accidents on Steam Railroads ---------- 2
4 - Steam Railroad Non-Casualty Accidents ---------- 3
5 - Three-Year Comparison of Non-Casualty Accidents on Steam Railroads ---------- 3
6 - Three-Year Comparison of Persons Killed and Injured on Steam Railroads ---------- 5
7 - Accidents to Employees of Steam Railroads in Pennsylvania ---------- 4
8 - Ages of Enginemen, Firemen, Conductors, Brakemen and Flagmen Killed and Injured in Train and Train Service Accidents ---------- 5
9 - Accidents on Street Railways ---------- 6
10 - Comparison of Persons Killed and Injured on Street Railways ---------- 6
11 - Summary of Accidents Involving Regulated Transportation by Motor Vehicle ---------- 7
12 - Summary of All Classes of Accidents Involving Regulated Motor Transportation ---------- 8
13 - Three-Year Comparison of Casualty and Property Damage Accidents Regulated Motor Transportation ---------- 8
14 - Summary of Accidents Involving Service Utilities ---------- 9
15 - Comparison of Persons Killed and Injured in Accidents Involving Service Utilities ---------- 9
16 - Accidents Involving Electric Service Utilities ---------- 10
17 - Comparison of Persons Killed and Injured In Accidents Involving Electric Service Utilities ---------- 10
18 - Accidents Involving Gas Service Utilities ---------- 11
19 - Comparison of Persons Killed and Injured in Accidents Involving Gas Service Utilities ---------- 11
20 - Accidents Involving Water Service Utilities ---------- 12
21 - Comparison of Persons Killed and Injured in Accidents Involving Water Service Utilities ---------- 12
22 - Accidents Involving Telephone and Telegraph Utilities ---------- 13
23 - Comparison of Persons Killed and Injured in Accidents Involving Telephone and Telegraph Utilities ---------- 13
24 - Accidents Involving Other Utilities ---------- 14
25 - Comparison of Persons Killed and Injured in Accidents Involving Other Service Utilities ---------- 14

APPENDIX

Grade Crossing Data

A - Protected and Unprotected Grade Crossings ---------- 15
B - Types of Grade Crossing Protection ---------- 15
C - Grade Crossing Accidents on Steam Railroads ---------- 16
D - Persons Killed and Injured at Grade Crossings on Steam Railroads ---------- 16
E - Casualties at Protected and Unprotected Grade Crossings (1940, 1941 and 1942) ---------- 17
F - Character of Location Where Grade Crossing Accident Occurred (1940, 1941 and 1942) ---------- 18
G - Period of Day When Grade Crossing Accident Occurred (1940, 1941 and 1942) ---------- 19

H - Hour of Day When Grade Crossing Accident Occurred ---------- 20
I - Day of Week When Grade Crossing Accident Occurred ---------- 20
J - Month of Year When Grade Crossing Accident Occurred ---------- 20
K - Character of Track Where Grade Crossing Accident Occurred (1940, 1941 and 1942) ---------- 21
L - Casualties Resulting From Accidents Involving Contact with Trains (1940, 1941 and 1942) ---------- 21
M - Accidents Involving Vehicles at Unprotected and Protected Public Grade Crossings Resulting in No Injuries to Persons (1940, 1941 and 1942) ---------- 21
N - Detailed analysis of Casualties and Accidents Involving Automobiles at Grade Crossings ---------- 22
O - Details of Train Movements where Grade Crossing Accidents Occurred ---------- 22
P - Accidents and Casualties Involving Automobiles at Protected Grade Crossings (1940, 1941 and 1942) --- 23
Q - Casualty and Non-Casualty Accidents Involving Contact With Trains at Grade Crossings Protected by Gates (1940, 1941 and 1942) ---------- 23
R - Crossing Gates and Flashing Light Signals Struck and Damaged by Automobiles (No Contact with Engine or Train) (1940, 1941 and 1942) ---------- 24
S - Accidents and Casualties Occurring During Time Crossings were Unprotected at Public Grade Crossings Protected Part Time by Watchman and Gates (1933 - 1942) ---------- 24
T - Condition of Weather Where Grade Crossing Accident Occurred ---------- 24
U - Speed of Trains Where Grade Crossing Accidents Occurred ---------- 25
V - Road Conditions Where Grade Crossing Accidents Occurred ---------- 25
W - Age of Driver of Vehicles Involved in Grade Crossing Accidents ---------- 25
X - Sex of Driver of Vehicles Involved in Grade Crossing Accidents ---------- 25
Y - Familiarity of Driver of Vehicles with Grade Crossing Where Accidents Occurred ---------- 25
Z - Accidents and Casualties of Grade Crossing Accidents by Counties ---------- 26
AA - Grade Crossing Accidents Compared with Automobile Registrations (1933 - 1942) ---------- 27
BB - Chart Showing Casualty Accidents and Number of Fatalities at Grade Crossings over Steam Railroad Tracks in Pennsylvania (1933 - 1942) ---------- 28

DETAILED INFORMATION PERTAINING TO ACCIDENTS
INVOLVING REGULATED MOTOR TRANSPORTATION

I - Accidents Involving Call & Demand Service in Regulated Motor Transportation ---------- 29
II - Accidents Involving Schedule Bus Service in Regulated Motor Transportation ---------- 30
III - Accidents Involving Group and Party Service in Regulated Motor Transportation ---------- 31
IV - Accidents Involving Freight and Merchandise Service in Regulated Motor Transportation ---------- 32
V - Accidents Involving Contract Carrier Service in Regulated Motor Transportation ---------- 33
VI - Comparison of Persons Killed and Injured in Accidents Involving Call & Demand Service ---------- 34
VII - Comparison of Persons Killed and Injured in Accidents Involving Scheduled Bus Service ---------- 34
VIII - Comparison of Persons Killed and Injured in Accidents Involving Group & Party Service ---------- 34
IX - Comparison of Persons Killed and Injured in Accidents Involving Freight & Merchandise Service ---------- 35
X - Comparison of Persons Killed and Injured in Accidents Involving Contract Carrier Service ---------- 35

TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS	PER CENT OF TOTAL KILLED	PER CENT OF TOTAL INJURED
Steam Railroad	2916	358	2780	27.35	58.59	22.22
Street Railway	4877	100	6002	45.75	16.37	47.99
Motor Transportation	1993	80	2896	18.70	13.09	23.15
Electric	481	36	460	4.51	5.89	3.68
Gas	158	32	138	1.48	5.24	1.10
Water	73		74	0.69		0.59
Telephone & Telegraph	135	1	136	1.27	0.16	1.09
Other Utilities	27	4	24	0.25	0.65	0.19
TOTAL	10,660	611	12,510	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	102	2048	5	199	8	132	14	424	1	108		73		113		21	130	3118	21.29	24.92
Trespasser	154	68	12	47		3	4	3						1	3	1	173	123	28.31	0.98
Other	6	70		82	7	46	15	30	5	10		1	1	20	1	2	35	261	5.73	2.09
Passenger, Patron or Consumer	7	350	16	3742	23	1752	3	3	26	20				2			75	5869	12.27	46.92
Pedestrian	23	14	40	575	19	267											82	856	13.42	6.84
Occupant Other Vehicle	66	230	27	1357	23	696											116	2283	18.99	18.25
TOTAL	358	2780	100	6002	80	2896	36	460	32	138		74	1	136	4	24	611	12,510		
Per Cent Killed	58.6		16.3		13.1		5.9		5.2				0.2		0.7				100.00	
Per Cent Injured		22.2		48.0		23.1		3.7		1.1		0.6		1.1		0.2				100.00

K - Killed
I - Injured

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		*OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
236	Grade Crossings (for details-see appendix)							89	244	89	244	24.86	8.78
45	Collisions	13	48		19	1			3	14	70	3.91	2.52
14	Derailments	12	16	1	13				2	13	31	3.63	1.11
128	At station or loading platforms		14		112				7		133		4.78
60	Defect or failure of roadway or equipment		51		8			1	5	1	64	0.28	2.30
59	Operating switches		59								59		2.12
89	Struck overhead or side obstruction	3	85				1		1	3	87	0.83	3.13
268	Repairing track or roadbed	2	279							2	279	0.56	10.04
58	Struck by flying missile, glass, etc.		56		1				1		58		2.09
107	Coupling or uncoupling	6	101							6	101	1.68	3.63
83	Falling on locomotive or car		57		24				2		83		2.99
258	Falling from locomotive or car	16	206	2	11	7	10		8	25	235	6.98	8.45
488	Getting on or off locomotive or car		358	1	118		7		4	1	487	0.28	17.52
303	Struck by locomotive or car	44	61	3	3	145	48	3	5	195	117	54.47	4.21
118	Operating hand brakes		118								118		4.24
289	Sudden starting or stopping of trains	3	266		15			2	23	5	304	1.40	10.94
2	Coming in contact with catenary wire	1				1				2		0.56	
117	On or about locomotive		117								117		4.21
194	Miscellaneous	2	156		26		2		9	2	193	0.56	6.94
2916	TOTAL	102	2048	7	350	154	68	95	314	358	2780		
	Per Cent Killed	28.5		1.9		43.1		26.5				100.0	
	Per Cent Injured		73.7		12.6		2.4		11.3				100.0

* "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed
I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $150 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE
COLLISIONS:				
MAIN TRACK	91			+54.24
YARD TRACK	506	597	31.57	+22.22
DERAILMENTS:				
MAIN TRACK	519			+19.31
YARD TRACK	394	913	48.28	+38.73
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		295	15.60	+40.48
MISCELLANEOUS		86	4.55	+68.63
TOTAL		1891	100.00	+30.14

Note: 540 of the 913 Derailments (59.1%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

STEAM RAILROADS
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS
(PROPERTY DAMAGE $150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR * DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR * DECREASE
1940	1039	+34.24	$1,253,347	+3[illegible].45
1941	1453	+39.85	1,651,190	+31.74
1942	1891	+30.14	2,485,798	+50.55

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED 1940	KILLED 1941	KILLED 1942	%INCREASE OR DECREASE *	INJURED 1940	INJURED 1941	INJURED 1942	% INCREASE OR DECREASE *
EMPLOYEES	50	106	102	- 3.77	950	1577	2048	+ 29.87
PASSENGERS	1	8	7	- 12.50	349	398	350	- 12.06
TRESPASSERS	171	160	154	- 3.75	98	86	68	- 20.93
OTHERS **	70	72	95	+ 31.94	287	302	314	+ 3.97
TOTAL	292	346	358	+ 3.47	1684	2363	2780	+ 17.65

* Comparison of 1942 with 1941
** Others consist chiefly of travellers on streets and highways

TABLE NO. 7

ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT KILLED	PER CENT INJURED
Road Enginemen	7	47	6.86	2.29
Road Firemen	9	104	8.83	5.08
Road Conductors	8	138	7.85	6.73
Road Brakemen	10	333	9.80	16.26
Road Flagmen		27		1.32
Road Baggagemen		8		0.40
Yard Enginemen and Firemen	1	84	0.98	4.10
Yard Brakemen and Conductors	30	841	29.41	41.06
Yard Switch Tenders		9		0.44
Crossing Watchmen	1	2	0.98	0.10
Track Walkers	2	1	1.96	0.05
Sectionmen and Work Train Laborers	16	282	15.69	13.77
Signalmen and Signal Maintainers	2	11	1.96	0.54
Station Baggagemen		5		0.24
Car Cleaners	1	2	0.98	0.10
Car Inspectors	5	10	4.90	0.49
Car Repairmen	2	20	1.96	0.98
Carpenters		14		0.68
Dining Car Employees		62		3.03
Miscellaneous	3	34	2.94	1.66
Employees Not on Duty	5	14	4.90	0.68
TOTAL	102	2048	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21				3	5	7.08				1	15	4.[illegible]
21 - 30				2	35	32.74				1	98	29.40
31 - 40				3	26	25.67		2	1.37	4	69	21.23
41 - 50	2	8	18.52	1	24	22.12	2	32	23.29	2	89	26.[illegible]
51 - 60	4	23	50.00		10	8.85	2	69	48.63	1	[illegible]	14.29
61		2	3.70					4	2.74		3	0.[illegible]
62	1	1	3.70				1	6	4.79		2	0.[illegible]
63		2	3.70					7	4.79		1	0.29
64		1	1.86				1	11	8.22		2	0.[illegible]
65		4	7.40		1	0.88		1	0.69			
Over 65		5	9.26		3	2.66	2	4	4.11		3	0.88
Not Reported		1	1.86					2	1.37	1	4	1.20
Total	7	47	100.00	9	104	100.00	8	138	100.00	10	333	100.00

Age	Road Flagmen			Yard Enginemen and Firemen			Yard Brakemen and Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					5	5.88	1	43	5.05	5	68	4.45
21 - 30		8	29.62	1	22	27.06	15	360	43.06	19	527	33.07
31 - 40		3	11.11		13	15.29	5	132	15.73	12	245	15.[illegible]8
41 - 50		7	25.93		15	17.65	4	146	17.22	11	320	20.20
51 - 60		6	22.22		15	17.65	2	99	11.60	9	270	17.02
61					3	3.53	1	10	1.26	1	22	1.40
62					1	1.17	1	6	0.80	3	16	1.10
63					4	4.71		10	1.15		24	1.40
64		2	7.41					8	0.92	1	24	1.53
65					3	3.53	1	6	0.80	1	15	0.98
Over 65					3	3.53		3	0.34	2	21	1.40
Not Reported		1	3.71					18	2.07	1	26	1.65
Total		27	100.00	1	84	100.00	30	841	100.00	65	1574	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
129	Collision of cars	1	21	11	407				2					12	430	12.0	7.2
1277	Collision of car and vehicle		24		549		1	27	1354		16		8	27	1952	27.0	32.5
659	Struck by car	2	3	4	10	11	7			40	530		73	57	623	57.0	10.1
30	Derailment of car		2		150										152		2.5
33	Contact with overhead or side obst.				12	1	21							1	33	1.0	0.6
2	Contact with trolley or feed wire or third rail		1	1										1	1	1.0	0.1
105	Emergency stop		1		119										120		2.0
56	Defect or failure of roadway or eqp.		1		96				1						98		1.6
337	Caught by doors		1		324										325		5.1
257	Boarding standing car		5		284		1								290		4.9
670	Alighting from car		9		659		12								680		11.3
656	Falling within car		4		608										612		10.2
9	Jumping on or off car while in motion		1		5		3								9		0.2
376	At elevated or subway platforms				378		1								379		6.3
68	Repair work on right of way	2	65								1			2	66	2.0	1.0
58	Struck by flying missile, glass, etc.		6		58						1				65		1.0
155	Miscellaneous		55		83		1				27		1		167		2.8
4877	TOTAL	5	199	16	3742	12	47	27	1357	40	575		82	100	6002		
	Per Cent Killed	5.0		16.0		12.0		27.0		40.0						100.0	
	Per Cent Injured		3.3		62.3		0.8		22.6		9.6		1.4				100.0

K - Killed
I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

	KILLED				INJURED			
	YEAR			COMPARISON OF 1942 WITH 1941	YEAR			COMPARISON OF 1942 WITH 1941
	1940	1941	1942		1940	1941	1942	
Employees	2	4	5	+ 25.00%	221	232	199	- 14.22%
Passengers		3	16	+433.33%	3000	3369	3742	+ 11.07%
Trespassers	11	7	12	+ 71.43%	68	31	47	+ 51.61%
Occupants of other Vehicles	13	21	27	+ 28.57%	1150	1238	1357	+ 9.61%
Pedestrians	26	31	40	+ 29.03%	405	471	575	+ 22.08%
Others					38	46	82	+ 78.26%
TOTAL	52	66	100	+ 51.51%	4882	5387	6002	+ 11.42%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - X for details of casualty accidents)

S.	CAUSE OR NATURE OF ACCIDENT	EM-PLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
26	Collision with other Vehicle	6	102	2	757			3	14	21	674		2	32	1549	40.0	53.5
54	Collision with fixed object		11		94				2		1		8		116		1.0
97	Struck by auto-bus, taxicab or truck				5			12	156	2	5	6	23	20	1[illegible]	25.0	6.5
08	Running or walking into side of auto-bus, taxicab or truck				1			4	94			1	12	5	107	6.3	3.7
32	Boarding or alighting (Standing vehicle)		1		332		1								33[illegible]		11.5
24	Falling within vehicle				124										12[illegible]		4.3
84	Caught by vehicle doors				84								1		8[illegible]		.3
9	Jumping on or off vehicle in motion				7		2								9		.3
51	Sudden stop of vehicle				186										1[illegible]6		6.4
15	Defect or failure of equipment		1		46										47		1.7
36	Vehicle skidded		5		70						14				89		3.1
10	Highway defect		3		12										15		0.5
3	Apparent reckless operation of vehicle	1	1		3						2			1	6	1.2	.2
34	Miscellaneous	1	8	21	31				1					22	40	27.5	1.4
93	TOTAL	8	132	23	1752		3	19	267	23	696	7	46	80	2896		
	Per Cent Killed	10.0		28.8				23.8		28.8		8.6				100.0	
	Per Cent Injured		4.6		60.5		0.1		9.2		24.0		1.6				100.0

K - Killed
I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	NUMBER OF ACCIDENTS (NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Servi e)	401	531	6	758	129	$ 47,032.45
Schedule Route (Bus Service)	313	1296	46	1904	304	145,747.54
Group and Party (Bus Service)	218	6		6	1	110.00
Freight & Merchandise (Truck)	9530	118	22	172	128	94,093.16
Contract Carrier (Persons and Property)	1352	42	6	56	34	53,972.76
TOTAL	11,814	1993	80	2896	596	340,955.91

Note: See Appendix - Tables I - X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1940	14,302	2,307	- 62.95%	56	- 15.15%	2,030	+ 15.93%	$229,730.17	- 16.16%
1941	11,994	2,252	- 2.38%	49	- 12.50%	2,266	+ 11.63%	302,106.58	+ 31.50%
1942	11,814	2,589	+ 14.96%	80	+ 63.27%	2,896	+ 27.80%	340,955.91	+ 12.86%

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
46	Electric - Contact with charged wires or equipment	10	8	4	2	14	10	3	2	31	22	42.5	3.4
229	Falling - (other than into water)	3	204		2	1	17		3	4	226	5.5	27.2
59	Striking against or struck by objects		55		1		3				59		7.0
250	Handling materials		252								252		30.3
15	Defect or failure of equipment or machinery		19								19		2.[illegible]
67	Involving use of tools - no defect		67								67		[illegible]
52	Automobile accident	2	28			2	24			4	52	[illegible]	6.2
1	Failure to use protective devices provided		1								1		0.1
22	Burns - not from electric source		20						3		23		2.8
16	Explosion		6				3		9		18		2.1
3	Drowning			3						3		4.0	
34	Asphyxiation		4			5	1	26	8	31	13	42.5	1.6
28	Infection from minor wounds		28								28		3.4
52	Miscellaneous		47				5				52		6.2
874	TOTAL	15	739	7	5	22	63	29	25	73	832		
	Per Cent Killed	20.6		9.6		30.1		39.7				100.0	
	Per Cent Injured		88.8		0.06		7.6		3.0				100.0

K - Killed
I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1942 WITH 1941	YEAR			COMPARISON OF 1942 WITH 1941
	1940	1941	1942		1940	1941	1942	
EMPLOYEES	9	17	15	- 11.76	848	912	739	- 18.97
TRESPASSERS	9	5	7	+ 40.00	9	6	5	- 16.67
OTHERS	24	26	22	- 15.38	110	118	63	- 46.61
PATRONS OR CONSUMERS	16	7	29	+314.29	74	28	25	- 10.71
TOTAL	58	55	73	+ 32.73	1041	1064	832	- 21.80

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
45	Electric - Contact with charged wires or equipment	10	7	4	2	14	10	3	2	31	21	86.1	4.6
135	Falling -(other than into water)	3	119		1	1	11		1	4	132	11.1	28.7
33	Striking against or struck by objects		30				3				33		7.2
155	Handling materials		157								157		34.1
8	Defect or failure of equipment or machinery		12								12		2.6
33	Involving use of tools - no defect		33								33		7.2
16	Automobile accident	1	12				4			1	16	2.8	3.5
	Failure to use protective devices provided												
11	Burns - not from electric source		11								11		2.4
2	Explosion		2								2		0.4
	Drowning												
3	Asphyxiation		3								3		0.6
15	Infection from minor wounds		15								15		3.3
25	Miscellaneous		23				2				25		5.4
481	TOTAL	14	424	4	3	15	30	3	3	36	460		
	Per Cent Killed	38.9		11.1		41.7		8.3				100.0	
	Per Cent Injured		92.1		0.7		6.5		0.7				100.0

K - Killed
I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1940	7	427	5	5	22	46	4	2	38	480
1941	16	469	2	4	15	31	4	6	37	510
1942	14	424	4	3	15	30	3	3	36	460

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		[illegible]	[illegible]
		K	I	K	I	K	I	K	I	K	I		
	Electric - Contact with charged wire or equipment												
25	Falling - (other than into water)		22				3				25		18.1
7	Striking against or struck by objects		7								7		5.[illegible]
45	Handling materials		45								45		32.6
2	Defect or failure of equipment or machinery		2								2		1.[illegible]
10	Involving use of tools - no defect		10								10		7.[illegible]
7	Automobile accident	1	3				3			1	6	7.1	4.3
	Failure to use protective devices provided												
6	Burns - not from electric source		3						3		6		.3
14	Explosion		4				3		9		16		11.6
	Drowning												
31	Asphyxiation		1			5	1	26	3	31	10	90.9	7.3
4	Infection from minor wounds		4								4		2.9
7	Miscellaneous		7								7		5.1
158	TOTAL	1	108			5	10	26	20	32	138		
	Per Cent Killed	3.1				15.7		81.2				100.0	
	Per Cent Injured		78.3				7.2		14.5				100.0

K - Killed
I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1940	1	126		2	1	30	12	69	14	227
1941		143		1	10	49	3	18	13	211
1942	1	108			5	10	26	20	32	138

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Electric - Contact with charged wires or equipment		1								1		1.4
19	Falling - (other than into water)		18				1				19		25.7
2	Striking against or struck by objects		2								2		2.7
24	Handling materials		24								24		32.4
4	Defect or failure of equipment or machinery		4								4		5.4
15	Involving use of tools - no defect		15								15		20.2
2	Automobile accident		2								2		2.7
1	Failure to use protective devices provided		1								1		1.4
1	Burns - not from electric source		2								2		2.7
	Explosion												
	Drowning												
	Asphyxiation												
2	Infection from minor wounds		2								2		2.7
2	Miscellaneous		2								2		2.7
73	TOTAL		73				1				74		
	Per Cent Killed												
	Per Cent Injured		98.6				1.4						100.0

K - Killed
I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1940	1	127	1		1	5			3	132
1941	1	106	2			6		2	3	114
1942		73				1				74

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Electric - Contact with charged wires or equipment												
44	Falling - (other than into water)		40				2		2		44		32.4
16	Striking against or struck by objects		15		1						16		11.7
19	Handling materials		19								19		14.0
1	Defect or failure of equipment or machinery		1								1		0.8
6	Involving use of tools - no defect		6								6		4.4
25	Automobile accident		11			1	15			1	26	100.0	19.1
	Failure to use protective devices provided												
3	Burns - not from electric source		3								3		2.2
	Explosion												
	Drowning												
	Asphyxiation												
5	Infection from minor wounds		5								5		3.7
16	Miscellaneous		13				3				16		11.7
135	TOTAL		113		1	1	20		2	1	136		
	Per Cent Killed					100.0						100.0	
	Per Cent Injured		83.0		0.8		14.7		1.5				100.0

K - Killed
I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1940		144		1		25		3		173
1941		159		1		32		2		194
1942		113		1	1	20		2	1	136

TABLE NO. 24 - ACCIDENTS INVOLVING* OTHER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
6	Falling - (other than into water)		5		1						6		25.0
1	Striking against or struck by objects		1								1		4.2
7	Handling materials		7								7		29.2
	Defect or failure of equipment or machinery												
3	Involving use of tools - no defect		3								3		12.5
2	Automobile accident					1	2			1	2	25.0	8.3
	Failure to use protective devices provided												
1	Burns - not from electric source		1								1		4.2
	Explosion												
3	Drowning			3						3		75.0	
	Asphyxiation												
2	Infection from minor wounds		2								2		8.3
2	Miscellaneous		2								2		8.3
27	TOTAL		21	3	1	1	2			4	24		
	Per Cent Killed			75.0		25.0						100.0	
	Per Cent Injured	87.5			4.2		8.3						100.0

K - Killed
I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING *OTHER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1940		24	3	1		4			3	29
1941		35	1		1				2	35
1942		21	3	1	1	2			4	24

* Other utilities as herein used consist of: Bridge, Canal, Express, Ferry, Pipe Line and Sewerage.

APPENDIX
- 1942 -

DETAILED INFORMATION PERTAINING TO
ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS
TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2160	19.26
Protected by trainmen	1446	12.90
Total Protected	3606	32.16
Unprotected	7608	67.84
TOTAL CROSSINGS	11,214	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	512	14.2
Watchmen	348	9.7
Flashing light signals	1131	31.4
Other visual signals	30	0.8
Bells	139	3.8
Trainmen	1446	40.1
TOTAL	3606	100.0

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	243	90		10	2	2	245	102	347	49.15
Protected by gates	29	8		8	2		31	16	47	6.66
Protected by watchmen	32	6		2	1		33	8	41	5.81
Protected by bells	13	6			1	1	14	7	21	2.97
Protected by visual signals	122	41		17	1	1	123	59	182	25.78
Protected by trainmen	51	16			1		52	16	68	9.63
Total Accidents at Protected Crossings	247	77		27	6	2	253	106	359	50.85
Total Accidents-Non-Casualty	490				8		498			70.54
Total Accidents-Casualty		167		37		4		208		29.46
TOTAL ACCIDENTS	657		37		12				706	100.00
Per Cent of Total Accidents	93.06		5.24		1.70				100.00	

NC - Non-Casualty
C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K and I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	33	111	6	4		3	39	118	157	52.69
Protected by gates	3	13	5	3			8	16	24	8.05
Protected by watchmen	1	6	2				3	6	9	3.02
Protected by bells	1	7			1		2	7	9	3.02
Protected by visual signals	9	52	10	7		1	19	60	79	26.51
Protected by trainmen	3	17					3	17	20	6.71
TOTAL	50	206	23	14	1	4	74	224	298	100.00
Killed and injured at protected crossings	17	95	17	10	1	1	35	106	141	47.32
Per Cent of total killed and injured	85.90		12.42		1.68					100.00

K - Killed
I - Injured

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1940, 1941 and 1942

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR (Decrease / Increase)
*PROTECTED	1940	2174	26	
	1941	2166	23	25.7
	1942	2160	32	11.5 / 39.1
UNPROTECTED	1940	9237	34	
	1941	9177	37	70.0 / 8.8
	1942	9054	42	15.6
			INJURED	
*PROTECTED	1940	2174	105	
	1941	2166	123	18.0 / 17.1
	1942	2160	89	27.6
UNPROTECTED	1940	9237	143	
	1941	9177	96	5.9 / 32.9
	1942	9054	135	40.6

* Not including those protected by trainmen

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENT OCCURRED
1940, 1941 and 1942

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	UNPROTECTED	1940	168	+ 22.6%	11	+ 37.5%	56	- 26.3%
		1941	157	- 6.5%	7	- 36.4%	39	- 30.4%
		1942	176	+ 12.1%	14	+100.0%	50	+ 28.2%
	PROTECTED	1940	192	+ 9.7%	20	+ 5.3%	68	- 20.9%
		1941	260	+ 35.4%	16	- 20.0%	76	+ 11.8%
		1942	268	+ 3.1%	23	+ 43.8%	69	- 9.2%
RURAL	UNPROTECTED	1940	196	+ 35.2%	23	+ 91.7%	87	+ 14.5%
		1941	204	+ 4.1%	30	+ 30.4%	57	- 34.5%
		1942	171	- 16.2%	25	- 16.7%	68	+ 19.3%
	PROTECTED	1940	104	+ 44.4%	6	- 62.5%	37	- 11.9%
		1941	113	+ 8.7%	7	+ 16.7%	47	+ 27.0%
		1942	91	- 19.5%	12	+ 7.1%	37	- 21.3%

* Cities or boroughs with population over 2,500.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED
1940, 1941 and 1942

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1940	293		23.1
	1941	310		5.8
	1942	315		1.6
		PERSONS KILLED		
	1940	32		14.3
	1941	32		
	1942	45		40.6
		PERSONS INJURED		
	1940	96	22.6	
	1941	72	25.0	
	1942	90		25.0
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1940	367		20.1
	1941	424		15.5
	1942	391	7.8	
		PERSONS KILLED		
	1940	28		3.7
	1941	28		
	1942	29		3.6
		PERSONS INJURED		
	1940	152	2.6	
	1941	147	3.3	
	1942	134	8.8	

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	54	7.65	5	25
1 to 1:59 a.m.	31	4.39	2	5
2 to 2:59 a.m.	32	4.53	1	18
3 to 3:59 a.m.	12	1.70		1
4 to 4:59 a.m.	20	2.83	2	6
5 to 5:59 a.m.	19	2.69	2	7
6 to 6:59 a.m.	47	6.66	4	17
7 to 7:59 a.m.	20	2.83	3	10
8 to 8:59 a.m.	24	3.40	4	10
9 to 9:59 a.m.	28	3.97	3	9
10 to 10:59 a.m.	16	2.27	1	1
11 to 11:59 a.m.	32	4.53	4	7
Noon to 12:59 p.m.	14	1.99		4
1 to 1:59 p.m.	30	4.25	2	12
2 to 2:59 p.m.	24	3.40	4	3
3 to 3:59 p.m.	24	3.40	4	5
4 to 4:59 p.m.	41	5.81	6	9
5 to 5:59 p.m.	35	4.96	6	10
6 to 6:59 p.m.	27	3.82	6	6
7 to 7:59 p.m.	44	6.23	8	11
8 to 8:59 p.m.	32	4.53	2	9
9 to 9:59 p.m.	24	3.40	1	9
10 to 10:59 p.m.	38	5.38	2	21
11 to 11:59 p.m.	38	5.38	2	9
TOTAL	706	100.00	74	224

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENT OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	92	13.03	13	34
Monday	87	12.32	9	16
Tuesday	95	13.46	4	38
Wednesday	93	13.17	13	30
Thursday	112	15.87	15	39
Friday	111	15.72	10	34
Saturday	116	16.43	10	33
TOTAL	706	100.00	74	224

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENT OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	89	12.60	5	30
February	98	13.88	9	35
March	58	8.22	3	22
April	42	5.95	8	7
May	44	6.23	6	24
June	33	4.67	6	5
July	37	5.24	4	15
August	41	5.81	3	7
September	58	8.22	4	23
October	52	7.37	12	17
November	68	9.63	8	15
December	86	12.18	6	24
TOTAL	706	100.00	74	224

TABLE K - CHARACTER OF TRACK WHERE
GRADE CROSSING ACCIDENT OCCURRED
1940, 1941 and 1942

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1940	559	60	225
	1941	638	58	190
	1942	629	72	207
Public Siding	1940	62		10
	1941	68	2	21
	1942	66	1	14
Private Siding	1940	39		13
	1941	28		8
	1942	11	1	3
Private Grade Crossing (Private Road)	1940	77	6	20
	1941	83	7	29
	1942	119	15	20

TABLE L - CASUALTIES RESULTING FROM
ACCIDENTS INVOLVING CONTACT WITH TRAINS
1940, 1941 and 1942

CONTACT BETWEEN TRAIN AND -	YEAR	NUMBER OF ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1940	170	48	233
	1941	161	49	206
	1942	167	50	208
Pedestrians	1940	21	12	11
	1941	22	11	11
	1942	37	23	14
Streetcars, Autobuses, Taxicabs	1940	1		3
	1941	1		1
	1942	1		2
Bicycles, Motorcycles, Wagons	1940	1		1
	1941	1		1
	1942	3	1	2

TABLE M - ACCIDENTS INVOLVING VEHICLES AT
UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS
RESULTING IN NO INJURIES TO PERSONS
1940, 1941 and 1942

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Unprotected	1940	253		
	1941	275		8.7
	1942	245	12.2	
Protected	1940	214		
	1941	274		28.0
	1942	253	7.7	

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENTS	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
Auto struck by train	32	124	348	30.96
Auto driven into side of engine or train moving over crossing	11	56	178	15.84
Auto driven into side of engine or train standing on crossing		8	17	1.51
Auto driven through lowered gates into side of engine or train moving over crossing	1	2	6	0.53
Auto driven through lowered gates into side of engine or train standing on the crossing				
Auto driven through lowered gates and struck by engine or train		4	8	0.71
Auto stalled on crossing and struck by train	6	12	100	8.90
Total accidents involving contact between train and auto	50	206	657	58.45
Auto driven through crossing gate - no contact with train		3	436	38.79
Auto driven into flashing light signals - no contact with train		2	31	2.76
Total accidents involving automobiles at grade crossings	50	211	1124	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENT	CASUALTY ACCIDENT	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	69	48	29	40	16.57
Passenger train - reverse movement					
Freight train - normal movement	246	104	39	111	49.57
Freight train - reverse movement	6	4		5	1.42
Freight train - car ahead of engine	20	5	2	8	3.54
Switching movement - engine normal ahead of draft	26	10	1	17	5.10
Switching movement - engine reverse ahead of draft	8	3		3	1.56
Switching movement - engine pushing cars	31	6		9	5.24
Light engine - normal movement	68	22	3	24	12.75
Light engine - reverse movement	13	3		4	2.27
Motor track cars	5	2		2	0.99
Cars not attached	6	1		1	0.99
TOTAL	498	208	74	224	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1940, 1941 and 1942

YPE OF ROTEC-TION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
ates	539	1940	536*	0.994	3	18
	520	1941	541*	1.040	5	19
	512	1942	483*	0.943	8	19
atchman	359	1940	38	0.106	3	11
	349	1941	47	0.135	2	11
	348	1942	41	0.118	3	6
ells	144	1940	26	0.181	3	16
	140	1941	17	0.121	5	9
	139	1942	21	0.151	2	7
isual ignals	1132	1940	153*	0.135	9	39
	1157	1941	208*	0.180	11	54
	1161	1942	213*	0.183	19	62
rainmen	1421	1940	59	0.042		18
	1442	1941	88	0.061		34
	1446	1942	68	0.047	3	17

* Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES 1940, 1941 and 1942

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1940	8	1	11
	1941	9		7
	1942	15	2	7
Gates out of order	1940			
	1941	3		3
	1942	2		
Persons passing under or around lowered gates	1940	4	3	1
	1941	5	4	1
	1942	8	5	3
Automobile driven through lowered gates striking or being struck by train	1940	10	2	9
	1941	16	1	5
	1942	14	1	6
Unassigned	1940	4		
	1941	8		
	1942	8		

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1940, 1941 and 1942

TYPE OF PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1940	510		69.4
	1941	500	2.0	
	1942	436	12.8	
Flashing light signals struck and damaged	1940	25	19.4	
	1941	28		12.0
	1942	31		10.7

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS PROTECTED PART TIME BY WATCHMEN AND GATES --- 1933-1942

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1933	40	1	29
1934	45	7	33
1935	41	3	42
1936	30	2	30
1937	45	4	39
1938	31	1	26
1939	32		24
1940	46	4	13
1941	42	2	20
1942	55	3	22

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENT OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	316	132	49	131	63.46
Cloudy	88	43	17	50	18.55
Fog	25	4		7	4.11
Snow	35	17	4	23	7.37
Rain	34	12	4	13	6.51
TOTAL	498	208	74	224	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	12	5		8	2.41
1 - 5	193	41	6	53	33.15
6 - 10	92	38	11	36	18.42
11 - 20	111	50	10	57	22.30
21 - 30	42	37	21	34	11.19
31 - 40	24	21	11	26	6.37
41 - 50	10	7	5	5	2.41
51 - 60	7	5	5	1	1.70
61 - 70	1	1		1	0.28
Over 70	1				0.14
Not Reported	5	3	5	3	1.13
TOTAL	498	208	74	224	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	353	110	33	134	69.31
Wet	47	22	5	30	10.33
Muddy	1				0.15
Snowy	49	16	5	19	9.73
Icy	35	17	1	21	7.78
Not Reported	12	6	7	6	2.70
TOTAL	497	171	51	210	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	57	5	26	[illegible]
21 - 30	137	11	52	20.51
31 - 40	93	8	40	13.[illegible]2
41 - 50	83	9	35	12.[illegible]
51 - 60	37	11	18	5.[illegible]
Over 60	19	2	7	2.[illegible]
Not Reported	242	5	32	36.[illegible]
TOTAL	668	51	210	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	606	49	194	90.72
Female	51	2	13	7.63
Not Reported	11		3	1.65
TOTAL	668	51	210	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	562	46	191	84.13
Not Familiar	27		1	4.04
Not Reported	79	5	18	11.83
TOTAL	668	51	210	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	4		3	0.57
Allegheny	94	14	24	13.32
Armstrong	6			0.85
Beaver	3		1	0.43
Bedford	3			0.43
Berks	6	1		0.85
Blair	8	1	1	1.13
Bradford	4	2	2	0.57
Bucks	5		3	0.71
Butler	13	3	7	1.84
Cambria	17		2	2.41
Cameron	1			0.14
Carbon				
Centre	6		5	0.85
Chester	6		1	0.85
Clarion	3			0.43
Clearfield	19	1	11	2.69
Clinton	10	1	3	1.42
Columbia	6		5	0.85
Crawford	10		9	1.42
Cumberland	15	5	2	2.12
Dauphin	7	1	3	0.99
Delaware	21	1	6	2.97
Elk	9	1		1.27
Erie	37	10	13	5.24
Fayette	28	1	5	3.97
Forest				
Franklin	7	2	3	0.99
Fulton				
Green				
Huntingdon	2	1		0.28
Indiana	3	2	1	0.43
Jefferson	2	2		0.28
Juniata				

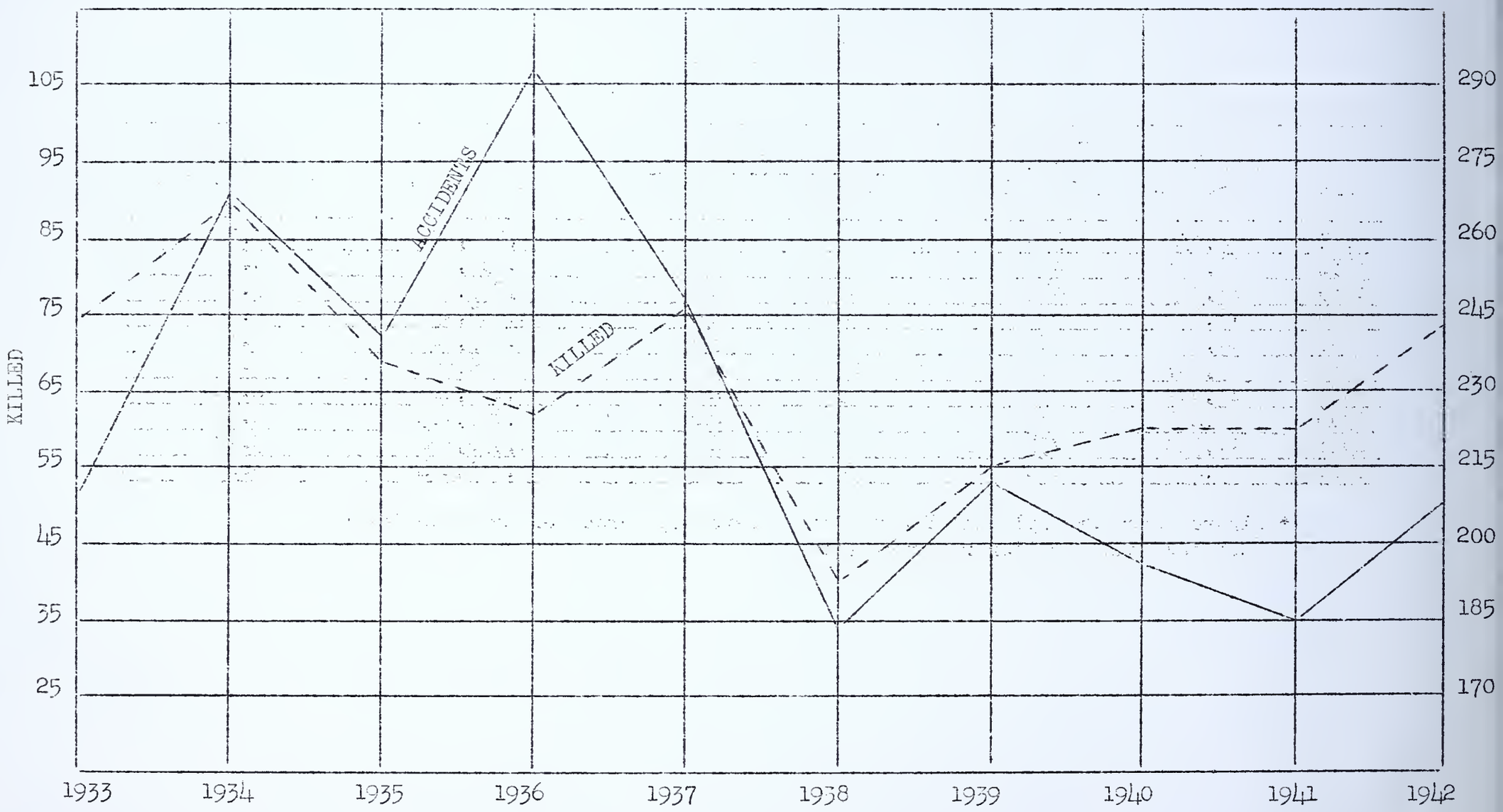
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	20	2	4	2.83
Lancaster	10	1	5	1.42
Lawrence	5		1	0.71
Lebanon	7			0.99
Lehigh	10	1	8	1.42
Luzerne	24		10	3.40
Lycoming	19	2	4	2.69
McKean	11		3	1.56
Mercer	23	2	7	3.26
Mifflin	1			0.14
Monroe	1			0.14
Montgomery	16	1	10	2.27
Montour	4	2	1	0.57
Northampton	9	1	1	1.27
Northumberland	31	4	13	4.39
Perry	1			0.14
Philadelphia	21	1	7	2.98
Pike	1	1		0.14
Potter				
Schuylkill	21	1	8	2.98
Snyder	1	1	2	0.14
Somerset	13		4	1.84
Sullivan	1			0.14
Susquehanna	2			0.28
Tioga	3			0.42
Union	9		3	1.27
Venango	7	2		0.99
Warren	1			0.14
Washington	18	1	3	2.55
Wayne	1			0.14
Westmoreland	27	1	11	3.82
Wyoming	2			0.28
York	31	1	9	4.39
TOTAL	706	74	224	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH AUTOMOBILE REGISTRATIONS
1933 - 1942

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		AUTOMOBILES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1933	12,134	528	74	295	1,672,605	3.16
1934	11,992	640	90	384	1,736,951	3.68
1935	11,829	674	69	319	1,787,836	3.77
1936	11,764	669	62	378	1,913,193	3.50
1937	11,509	638	77	322	2,045,228	3.12
1938	11,667	459	40	277	2,035,607	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,302	3.12
1942	11,214	706	74	224	2,211,324	3.19

* Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS
AND NUMBER OF FATALITIES AT GRADE CROSSINGS
OVER STEAM RAILROADS IN PENNSYLVANIA
1933 - 1942



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
303	Collision with other vehicle		57		261			1	3		185			1	506	16.7	66.8
9	Collision with fixed object		3		18										21		2.8
71	Struck by taxicab							4	64				5	4	69	66.6	9.1
33	Running or walking into side of taxicab				1			1	29				3	1	33	16.7	4.4
16	Boarding or alighting (Standing Vehicle)				16										16		2.1
6	Falling within vehicle				6										6		0.8
26	Caught by vehicle doors				25								1		26		3.4
4	Jumping on or off vehicle in motion				4										4		0.5
46	Sudden stop of vehicle				54										54		7.1
2	Defect or failure of equipment				3										3		0.4
5	Vehicle Skidded				4						2				6		0.8
6	Highway defect				10										10		1.3
	Apparent reckless operation of vehicle																
4	Miscellaneous				4										4		0.5
531	TOTAL		60		406			6	96		187		9	6	758		
	Per Cent Killed							100.0								100.0	
	Per Cent Injured		7.9		53.5				12.7		24.7		1.2				100.0

K - Killed
I - Injured

TABLE II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
419	Collision with other vehicle	1	16	2	494			2	11	10	346		2	15	869	32.6	45.6
37	Collision with fixed object		2		76				2				1		81		4.3
98	Struck by auto-bus				5			6	80		4	1	10	7	99	15.2	5.2
64	Running or walking into side of auto-bus							2	56				8	2	64	4.4	3.4
316	Boarding or alighting (Standing vehicle)		1		316		1								318		16.7
118	Falling within vehicle				118										118		6.2
57	Caught by vehicle doors				58										58		3.0
3	Jumping on or off vehicle in motion				3										3		0.2
113	Sudden stop of vehicle				130										130		6.8
10	Defect or failure of equipment				41										41		2.1
30	Vehicle skidded		4		66						12				82		4.3
2	Highway defect				2										2		0.1
1	Apparent reckless operation of vehicle				3						2				5		0.3
28	Miscellaneous	1	6	21	27				1					22	34	47.8	1.8
1296	TOTAL	2	29	23	1339		1	10	150	10	364	1	21	46	1904		
	Per Cent Killed	4.4		50.0				21.7		21.7		2.2				100.0	
	Per Cent Injured		1.5		70.3		0.1		7.9		19.1		1.1				100.0

K - Killed I - Injured

TABLE III - ACCIDENTS INVOLVING GROUP & PARTY
SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
	Collision with other vehicle																
	Collision with fixed object																
1	Struck by taxicab, autobus or truck										1				1		16.7
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
1	Caught by vehicle doors				1										1		16.7
	Jumping on or off vehicle in motion																
2	Sudden stop of vehicle				2										2		33.3
2	Defect or failure of equipment				2										2		33.3
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
6	TOTAL				5						1				6		
	Per Cent Killed																
	Per Cent Injured				83.3						16.7						100.0

K - Killed
I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
75	Collision with other vehicle	1	19		2					11	114			12	135	54.6	78.4
5	Collision with fixed object		4								1				5		2.9
21	Struck by taxicab, autobus or truck							1	9	2		4	7	7	16	31.8	9.3
10	Running or walking into side of taxicab, autobus or truck							1	8			1	1	2	9	9.1	5.2
	Boarding or alighting (Standing Vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
2	Jumping on or off vehicle in motion						2								2		1.2
	Sudden stop of vehicle																
	Defect or failure of equipment																
1	Vehicle Skidded		1												1		0.6
1	Highway defect		2												2		1.2
1	Apparent reckless operation of vehicle	1												1		4.5	
2	Miscellaneous		2												2		1.2
118	TOTAL	2	28		2		2	2	17	13	115	5	8	22	172		
	Per Cent Killed	9.1						9.1		59.1		22.7				100.0	
	Per Cent Injured	16.2		1.2		1.2		9.9		66.9		4.6				100.0	

K - Killed
I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

UMBER OF CIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
29	Collision with other vehicle	4	10								29			4	39	66.7	69.6
3	Collision with fixed object		2										7		9		1[illegible].1
6	Struck by taxicab, autobus or truck							1	3			1	1	2	4	33.3	7.1
1	Running or walking into side of taxicab, autobus or truck								1						1		1.8
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment		1												1		1.8
	Vehicle skidded																
1	Highway defect		1												1		1.8
1	Apparent reckless operation of vehicle		1												1		1.8
	Miscellaneous																
42	TOTAL	4	15					1	4		29	1	8	6	56		
	Per Cent Killed	66.6						16.7				16.7				100.0	
	Per Cent Injured		26.8						7.1		51.8		14.3				100.0

K - Killed
I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1940		20		266			2	67	3	114		3	5	470
1941		46	1	344			6	71		121			7	582
1942		60		406			6	96		187		9	6	758

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1940		30	1	848		4	9	53	19	261		23	29	1219
1941		54	1	928			6	123	7	309		15	14	1429
1942	2	29	23	1339		1	10	150	10	364	1	21	46	1904

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1940		1		16					1	5			1	22
1941				15			2	1		1			2	17
1942				5						1				6

K - Killed
I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1940		47				4	6	23	9	136	2	37	17	247
1941	5	26		4		3	4	17	9	115		6	18	171
1942	2	28		2		2	2	17	13	115	5	8	22	172

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1940	1	9		9			1	1	1	50	1	3	4	72
1941	2	9					6	17		41			8	67
1942	4	15					1	4		29	1	8	6	56

K - Killed
I - Injured

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

1943

Record of Accidents Involving the Facilities or Operations of Transportation and Service Utilities and Contract Carriers

Harrisburg, Pennsylvania
April 12, 1944

P38.39

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

Harrisburg, Pennsylvania
April 12, 1944

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1943.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1943, the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	70	Telephone	252
Street Railways	17	Sewerage	15
Pipe Lines	6	Canal	2
Ferries	16	Wharfage	3
Express	2	Bridge (Toll)	11
Common Carriers by Water	5	Telegraph	2
Bus--Scheduled Service	417	Steam Heat	32
Taxi--Call and Demand	424	Stock Yards	3
Bus--Group and Party	205	Airways	4
Truck--Common Carriers	7,600	Incline Plane	3
Electric	52	Grain Elevator	3
Gas	138	Refrigeration	1
Water	476		

Total - 9,739

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 905 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $150 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Reference to the following pages, summarized on page 15, will show that there has continued to be a substantial increase in casualty accidents involving steam railroads and street railways, whereas, accidents in all other categories, including motor transportation, show a decrease.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

Guy R. Johnson

Guy R. Johnson
Director of Bureau

Table No. INDEX OF TABLES Page

1 - Summary of Utility Accidents Involving Personal Injuries ---------- 1
2 - Classification of Persons Killed and Injured in Utility Accidents ---------- 1
3 - Casualty Accidents on Steam Railroads ---------- 2
4 - Steam Railroad Non-Casualty Accidents ---------- 3
5 - Three-Year Comparison of Non-Casualty Accidents on Steam Railroads ---------- 3
6 - Three-Year Comparison of Persons Killed and Injured on Steam Railroads ---------- 3
7 - Accidents to Employees of Steam Railroads in Pennsylvania ---------- 4
8 - Ages of Enginemen, Firemen, Conductors, Brakemen and Flagmen Killed and Injured in Train and Train Service Accidents ---------- 5
9 - Accidents on Street Railways ---------- 6
10 - Comparison of Persons Killed and Injured on Street Railways ---------- 6
11 - Summary of Accidents Involving Regulated Transportation by Motor Vehicle ---------- 7
12 - Summary of All Classes of Accidents Involving Regulated Motor Transportation ---------- 8
13 - Three-Year Comparison of Casualty and Property Damage Accidents Regulated Motor Transportation ---------- 8
14 - Summary of Accidents Involving Service Utilities ---------- 9
15 - Comparison of Persons Killed and Injured in Accidents Involving Service Utilities ---------- 9
16 - Accidents Involving Electric Service Utilities ---------- 10
17 - Comparison of Persons Killed and Injured in Accidents Involving Electric Service Utilities ---------- 10
18 - Accidents Involving Gas Service Utilities ---------- 11
19 - Comparison of Persons Killed and Injured in Accidents Involving Gas Service Utilities ---------- 11
20 - Accidents Involving Water Service Utilities ---------- 12
21 - Comparison of Persons Killed and Injured in Accidents Involving Water Service Utilities ---------- 12
22 - Accidents Involving Telephone and Telegraph Utilities ---------- 13
23 - Comparison of Persons Killed and Injured in Accidents Involving Telephone and Telegraph Utilities - 13
24 - Accidents Involving Other Utilities ---------- 14
25 - Comparison of Persons Killed and Injured in Accidents Involving Other Service Utilities ---------- 14
26 - Summary of All Utility Accidents Involving Injuries and Fatalities Compared with Accidents in 1941 and 1942 ---------- 15

APPENDIX
Grade Crossing Data

A - Protected and Unprotected Grade Crossings ---------- 16
B - Types of Grade Crossing Protection ---------- 16
C - Grade Crossing Accidents on Steam Railroads ---------- 17
D - Persons Killed and Injured at Grade Crossings on Steam Railroads ---------- 17
E - Casualties at Protected and Unprotected Grade Crossings (1941, 1942 and 1943) ---------- 18
F - Character of Location Where Grade Crossing Accident Occurred (1941, 1942 and 1943) ---------- 19

G - Period of Day When Grade Crossing Accident Occurred (1941, 1942 and 1943) ---------- 20
H - Hour of Day When Grade Crossing Accident Occurred ---------- 21
I - Day of Week When Grade Crossing Accident Occurred ---------- 21
J - Month of Year When Grade Crossing Accident Occurred ---------- 21
K - Character of Track Where Grade Crossing Accident Occurred (1941, 1942 and 1943) ---------- 22
L - Casualties Resulting From Accidents Involving Contact with Trains (1941, 1942 and 1943) ---------- 22
M - Accidents Involving Vehicles at Unprotected and Protected Public Grade Crossings Resulting in No Injuries to Persons (1941, 1942 and 1943) ---------- 22
N - Detailed Analysis of Casualties and Accidents Involving Automobiles at Grade Crossings ---------- 23
O - Details of Train Movements where Grade Crossing Accidents Occurred ---------- 23
P - Accidents and Casualties Involving Automobiles at Protected Grade Crossings (1941, 1942 and 1943) --- 24
Q - Casualty and Non-Casualty Accidents Involving Contact With Trains at Grade Crossings Protected by Gates (1941, 1942 and 1943) ---------- 24
R - Crossing Gates and Flashing Light Signals Struck and Damaged by Automobiles (No Contact with Engine or Train) (1941, 1942 and 1943) ---------- 25
S - Accidents and Casualties Occurring During Time Crossings were Unprotected at Public Grade Crossings Protected Part Time by Watchman and Gates (1934-1943) ---------- 25
T - Condition of Weather Where Grade Crossing Accident Occurred ---------- 25
U - Speed of Trains Where Grade Crossing Accidents Occurred ---------- 26
V - Road Conditions Where Grade Crossing Accidents Occurred ---------- 26
W - Age of Driver of Vehicles Involved in Grade Crossing Accidents ---------- 26
X - Sex of Driver of Vehicles Involved in Grade Crossing Accidents ---------- 26
Y - Familiarity of Driver of Vehicles with Grade Crossing Where Accidents Occurred ---------- 26
Z - Accidents and Casualties of Grade Crossing Accidents by Counties ---------- 27
AA - Grade Crossing Accidents Compared with Automobile Registrations (1934-1943) ---------- 28
BB - Chart Showing Casualty Accidents and Number of Fatalities at Grade Crossings over Steam Railroad Tracks in Pennsylvania (1934-1943) ---------- 29

DETAILED INFORMATION PERTAINING TO ACCIDENTS
INVOLVING REGULATED MOTOR TRANSPORTATION

I - Accidents Involving Call & Demand Service in Regulated Motor Transportation ---------- 30
II - Accidents Involving Schedule Bus Service in Regulated Motor Transportation ---------- 31
III - Accidents Involving Group and Party Service in Regulated Motor Transportation ---------- 32
IV - Accidents Involving Freight and Merchandise Service in Regulated Motor Transportation ---------- 33
V - Accidents Involving Contract Carrier Service in Regulated Motor Transportation ---------- 34
VI - Comparison of Persons Killed and Injured in Accidents Involving Call & Demand Service ---------- 35
VII - Comparison of Persons Killed and Injured in Accidents Involving Scheduled Bus Service ---------- 35
VIII - Comparison of Persons Killed and Injured in Accidents Involving Group & Party Service ---------- 35
IX - Comparison of Persons Killed and Injured in Accidents Involving Freight & Merchandise Service ----- 36
X - Comparison of Persons Killed and Injured in Accidents Involving Contract Carrier Service ---------- 36

TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS	PER CENT OF TOTAL KILLED	PER CENT OF TOTAL INJURED
Steam Railroad	3,592	407	3,678	31.51	65.96	27.29
Street Railway	5,135	94	6,264	45.04	15.24	46.48
Motor Transportation	1,936	63	2,826	16.98	10.21	20.97
Electric	409	31	396	3.59	5.02	2.94
Gas	138	14	129	1.21	2.27	0.96
Water	53	2	51	0.46	0.32	0.38
Telephone & Telegraph	114	3	113	1.00	0.49	0.83
Other Utilities	24	3	21	0.21	0.49	0.15
TOTAL	11,401	617	13,473	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANS-PORTA-TION		ELECTRIC		GAS		WATER		TELE-PHONE AND TELE-GRAPH		OTHER UTILI-TIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	95	2692	4	289	9	136	14	364		107		51	3	98		21	125	3758	20.26	27.9[illegible]
Trespasser	151	75	12	27		2	2	1		1	2			1	3		170	105	27.5[illegible]	0.78
Other	9	88	1	71	3	30	13	24	1	3				13			27	239	4.3	1.78
Passenger, Patron or Consumer	81	652	12	3983	6	1631	2	7	13	18				1			114	6232	18.4[illegible]	46.6[illegible]
Pedestrian	19	7	52	755	28	371											99	1133	16.0[illegible]	8.41
Occupant Other Vehicle	52	164	13	1139	17	648											82	1991	13.29	14.4[illegible]
TOTAL	407	3678	94	6264	63	2826	31	396	14	129	2	51	3	113	3	21	617	13,473		
Per Cent Killed	65.96		15.24		10.21		5.02		2.27		.32		.49		.49				100.00	
Per Cent Injured		27.29		46.48		20.97		2.94		.96		.38		.83		.15				100.00

K - Killed
I - Injured

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		*OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
178	Grade Crossings (for details-see appendix)		2					71	171	71	173	17.44	4.71
51	Collisions	7	59		61			2	1	9	121	2.21	3.29
28	Derailments	8	47	77	196				9	85	252	20.89	6.85
189	At station or loading platforms	2	55		109		1		23	2	188	0.49	5.11
17	Defect or failure of roadway or equipment		15		4		1				20		0.54
91	Operating switches		91								91		2.48
116	Struck overhead or side obstruction	10	102		2			1	1	11	105	2.70	2.85
172	Repairing track or roadbed	2	170							2	170	0.49	4.62
139	Struck by flying missile, glass, etc.		121		18				3		142		3.86
93	Coupling or uncoupling	2	91							2	91	0.49	2.48
120	Falling on locomotive or car		90		26				4		120		3.26
336	Falling from locomotive or car	19	293	1	9	2	9		5	22	316	5.41	8.59
672	Getting on or off locomotive or car	1	456	3	183	3	18	1	8	8	665	1.97	18.08
294	Struck by locomotive or car	34	61		4	141	41	4	15	179	121	43.98	3.29
128	Operating hand brakes		128								128		3.48
506	Sudden starting or stopping of trains	5	482		22		2		14	5	520	1.23	14.14
7	Coming in contact with catenary wire	2	1			4				6	1	1.47	0.03
174	On or about locomotive		174								174		4.73
281	Miscellaneous	3	254		18	1	3	1	5	5	280	1.23	7.61
3592	TOTAL	95	2692	81	652	151	75	80	259	407	3678		
	Per Cent Killed	23.34		19.90		37.10		19.66				100.00	
	Per Cent Injured		73.19		17.73		2.04		7.04				100.00

*"Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed
I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $150 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE
COLLISIONS:				
MAIN TRACK	87			- 4.40
YARD TRACK	604	691	31.71	+19.37
DERAILMENTS:				
MAIN TRACK	593			+14.26
YARD TRACK	479	1,072	49.20	+21.57
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		345	15.83	+16.95
MISCELLANEOUS		71	3.26	-17.44
TOTAL		2,179	100.00	+15.23

Note: 654 of the 1,072 Derailments (61.0%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

STEAM RAILROADS
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS
(PROPERTY DAMAGE 150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	[illegible]	[illegible]
1941	1,453	+39.05	1,051,190	+31.7[illegible]
1942	1,891	+30.14	2,425,790	+50.5[illegible]
1943	2,179	+15.23	2,597,7[illegible]	[illegible]

TABLE NO. 6
THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED 1941	KILLED 1942	KILLED 1943	%INCREASE OR DECREASE*	INJURED 1941	INJURED 1942	INJURED 1943	%INCREASE OR DECREASE*
EMPLOYEES	106	102	95	- 6.86%	1,577	2,048	2,692	+31.[illegible]
PASSENGERS	8	7	81	+1057.14%	398	350	652	+86.29%
TRESPASSERS	160	154	151	- 1.95%	86	68	75	+10.29
OTHERS **	72	95	80	- 15.79%	302	314	259	-17.52%
TOTAL	346	358	407	+ 13.69%	2,363	2,780	3,678	+32.30%

* Comparison of 1943 with 1942
** Others consist chiefly of travellers on streets and highways

TABLE NO. 7

ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT KILLED	PER CENT INJURED
Road Enginemen	6	83	6.31	3.08
Road Firemen	8	163	8.42	6.06
Road Conductors	3	161	3.16	5.98
Road Brakemen	18	465	18.95	17.27
Road Flagmen	2	45	2.11	1.67
Road Baggagemen		14		0.52
Yard Enginemen and Firemen	1	118	1.05	4.38
Yard Brakemen and Conductors	26	1,126	27.37	41.83
Yard Switch Tenders		11		0.41
Crossing Watchmen		3		0.11
Track Walkers	1	1	1.05	0.04
Sectionmen and Work Train Laborers	9	205	9.47	7.62
Signalmen and Signal Maintainers	3	13	3.16	0.48
Station Baggagemen		8		0.30
Car Cleaners	1	15	1.05	0.56
Car Inspectors	2	17	2.11	0.63
Car Repairmen	4	21	4.21	0.78
Carpenters	2	9	2.11	0.33
Dining Car Employees	1	122	1.05	4.53
Miscellaneous	7	65	7.37	2.42
Employees Not on Duty	1	27	1.05	1.00
TOTAL	95	2,692	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					3	1.75					3	0.62
21 - 30				2	51	31.00		3	1.83	1	142	29.31
31 - 40		8	8.99	1	65	38.60		10	6.10	7	117	25.07
41 - 50	1	19	22.47	4	33	21.64	1	42	26.22	3	106	22.57
51 - 60	3	40	48.31	1	7	4.68	1	74	45.73	3	73	15.73
61	1	3	4.50				1	4	3.05		3	0.62
62	1	2	3.37					9	5.59	2	4	1.24
63		4	4.50					10	6.10	1	4	1.04
64		1	1.12		1	0.58		2	1.22		4	0.83
65								3	1.83		3	0.62
Over 65		5	5.62					3	1.83		2	0.41
Not Reported		1	1.12		3	1.75		1	0.60	1	4	1.04
Total	6	83	100.00	8	163	100.00	3	161	100.00	18	485	100.00

Age	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21		1	2.13		3	2.52		12	1.04		22	0.90
21 - 30		7	14.89		28	23.53	5	346	30.27	8	7[illegible]	28.29
31 - 40	1	9	21.28		33	27.73	7	32[illegible]	29.08	15	57[illegible]	[illegible]
41 - 50	1	14	31.91		25	21.01	8	249	22.31	1[illegible]	[illegible]	2[illegible].7[illegible]
51 - 60		12	25.53	1	17	15.13	4	129	11.55	1[illegible]	35[illegible]	1[illegible].31
61					1	0.84	1	9	0.[illegible]7	3	[illegible]	1.03
62		2	4.26		6	5.04		9	0.73	3	[illegible]	[illegible]
63					2	1.68		[illegible]	0.70	1	2[illegible]	1.[illegible]5
64					1	0.84		10	0.[illegible]7		1[illegible]	0.[illegible]5
65					1	0.84		4	0.35		11	[illegible]
Over 65					1	0.84		11	0.95		[illegible]	[illegible]
Not Reported							1	10	0.95	2	1[illegible]	0.5
Total	2	45	100.00	1	118	100.00	26	1,126	100.00	6[illegible]	2,1[illegible]	1[illegible].00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OF THE TYPE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
174	Collision of cars	1	33		597						1			1	631	1.1	10.
1164	Collision of car and vehicle		46		513			13	1131		35		24	13	1749	13.8	28.
819	Struck by car	2	13	7	18	9	4		5	52	683	1	44	71	767	75.5	12.
46	Derailment of car		3		128				3		2				136		2.
3	Contact with overhead or side obst.				1		3								4		0.
8	Contact with trolley or feed wire or third rail	1	3		1	1	2							2	6	2.1	0.
78	Emergency stop		4		83										87		1.
102	Defect or failure of roadway or eqp.		18		109						4				131		2.
208	Caught by doors				206						2				208		3.
329	Boarding standing car		5		326						1				332		5.
796	Alighting from car		18	1	779									1	797	1.1	12.
738	Falling within car		6		741										747		12.
20	Jumping on or off car while in motion		1		2	2	15				1			2	19	2.1	0.
377	At elevated or subway platforms		5	4	373						1			4	379	4.3	6.
49	Repair work on right of way		42		1										43		0.
59	Struck by flying missile, glass, etc.		15		37		1				6		2		61		1.
165	Miscellaneous		77		68		2				19		1		167		2.
5135	TOTAL	4	289	12	3983	12	27	13	1139	52	755	1	71	94	6264		
	Per Cent Killed	4.3		12.8		12.8		13.8		55.2		1.1				100.0	
	Per Cent Injured		4.7		63.6		0.4		18.1		12.1		1.1				100.

K-- Killed
I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

	KILLED				INJURED			
	YEAR			COMPARISON OF 1943 WITH 1942	YEAR			COMPARISON OF 1943 WITH 1942
	1941	1942	1943		1941	1942	1943	
Employees	4	5	4	-20.00%	232	199	289	+45.22%
Passengers	3	16	12	-25.00%	3369	3742	3983	+ 6.44%
Trespassers	7	12	12	-	31	47	27	-42.55%
Occupants of other Vehicles	21	27	13	-51.85%	1230	1357	1139	-16.06%
Pedestrians	31	40	52	+30.00%	471	575	755	+31.30%
Others			1	100.00%	46	82	71	-13.41%
TOTAL	66	100	94	- 6.00%	5387	6002	6264	+ 4.37%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - K for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EM-PLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
777	Collision with other Vehicle	3	94	2	758			1	12	16	639	1	5	23	2508	76.4	3.4
44	Collision with fixed object		9		68				4				1		82		[illegible]
330	Struck by auto-bus, taxicab or truck	1	4	3	24			22	272		3	1	20	27	[illegible]	[illegible]	11.[illegible]
89	Running or walking into side of auto-bus, taxicab or truck		1		6			4	72	1	1		3	[illegible]	[illegible]	[illegible]	[illegible]
294	Boarding or alighting (Standing Vehicle)		3		292								1		296		10.[illegible]
90	Falling within vehicle		1		89										90		3.[illegible]
81	Caught by vehicle doors				80		1						1		[illegible]		1.[illegible]
17	Jumping on or off vehicle in motion	1			10		1	1	5					2	16	[illegible]	[illegible]
113	Sudden stop of vehicle				133				1		1				135		[illegible]
31	Defect or failure of equipment	2	5	1	106				2		1		1	3	115	[illegible]	[illegible]
21	Vehicle skidded		3		35				1		2				41		1.[illegible]
7	Highway defect		1		6										[illegible]		[illegible]
4	Apparent reckless operation of vehicle	1			3									1	4	1.0	[illegible]
38	Miscellaneous	1	15		21				2		1	1	1	2	[illegible]	[illegible]	1.[illegible]
1936	TOTAL	9	136	6	1631		2	28	371	17	648	3	38	63	[illegible]		
	Per Cent Killed	14.3		9.5				44.4		27.0		4.8				100.0	
	Per Cent Injured		4.8		57.7		0.1		13.1		22.9		1.4				100.0

K - Killed
I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	NUMBER OF ACCIDENTS (NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	424	694	10	985	159	$ 56,876.52
Schedule Route (Bus Service)	417	1,099	31	1,672	266	149,819.13
Group and Party (Bus Service)	205	-	-	-	-	-
Freight & Merchandise (Truck)	7,600	125	17	144	133	135,867.20
Contract Carrier (Persons and Property)	905	18	5	25	22	36,355.32
TOTAL	9,551	1,936	63	2,826	580	376,918.17

Note: See Appendix - Tables I - X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1941	11,994	2,252	- 2.38%	49	-12.50%	2,266	+11.63%	$320,106.58	+31.50%
1942	11,814	2,589	+14.96%	80	+63.27%	2,896	+27.80%	340,955.91	+12.86%
1943	9,551	2,516	- 2.82%	63	-21.25%	2,826	- 2.41%	376,918.17	+10.54%

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
45	Electric - Contact with charged wires or equipment	8	19	1	1	10	12	1	1	20	33	37.7	4.6
181	Falling - (other than into water)	3	168	1	1	1	6		2	5	177	[illegible]	24.5
98	Striking against or struck by objects	2	92			1	5			3	97	5.7	13.7
140	Handling materials	1	139							1	139	1.9	19.6
18	Defect or failure of equipment or machinery		14				2		2		18		2.5
62	Involving use of tools - no defect		62								62		8.7
26	Automobile accident		20				9				29		4.1
4	Failure to use protective devices provided		4								4		0.6
39	Burns - not from electric source		34					2	4	2	38	3.8	5.3
12	Explosion	3	2						9	3	11	5.7	1.6
5	Drowning			5					5	5	5	9.4	0.7
17	Asphyxiation					2	1	12	3	14	4	26.4	0.6
44	Infection from minor wounds		44								44		6.2
47	Miscellaneous		43		1		5				49		6.9
738	TOTAL	17	641	7	3	14	40	15	26	53	710		
	Per Cent Killed	32.1		13.2		26.4		28.3				100.0	
	Per Cent Injured		90.3		0.4		5.6		3.7				100.0

K - Killed
I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1943 WITH 1942	YEAR			COMPARISON OF 1943 WITH 1942
	1941	1942	1943		1941	1942	1943	
EMPLOYEES	17	15	17	+13.33%	912	739	641	-13.26%
TRESPASSERS	5	7	7	-0-	6	5	3	-40.00%
OTHERS	26	22	14	-36.36%	118	63	40	-36.51%
PATRONS OR CONSUMERS	7	29	15	-48.28%	28	25	26	+ 4.00%
TOTAL	55	73	53	-27.40%	1064	832	710	-14.63%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
42	Electric - Contact with charged wires or equipment	8	16	1	1	10	12	1	1	20	30	64.6	7.6
102	Falling - (other than into water)	2	97			1	2			3	99	9.7	25.0
56	Striking against or struck by objects		53			1	3			1	56	3.2	14.1
77	Handling materials	1	76							1	76	3.2	19.2
6	Defect or failure of equipment or machinery		5						1		6		1.5
32	Involving use of tools-no defect		32								32		8.1
12	Automobile accident		11				4				15		3.8
3	Failure to use protective devices provided		3								3		0.8
22	Burns-not from electric source		22								22		5.5
5	Explosion	3	2							3	2	9.7	0.6
1	Drowning			1						1		3.2	
3	Asphyxiation					1	1	1	5	2	6	6.4	1.5
24	Infection from minor wounds		24								24		6.0
24	Miscellaneous		23				2				25		6.3
409	TOTAL	14	364	2	1	13	24	2	7	31	396		
	Per Cent Killed	45.2		6.4		42.0		6.4				100.0	
	Per Cent Injured		92.0		0.3		6.0		1.7				100.0

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1941	16	469	2	4	15	31	4	6	37	510
1942	14	424	4	3	15	30	3	3	36	460
1943	14	364	2	1	13	24	2	7	31	396

K - Killed
I - Injured

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Electric - Contact with charged wire or equipment		1								1		0.8
30	Falling - (other than into water)		27		1		1		2		31		24.0
12	Striking against or struck by objects		13								13		10.1
24	Handling materials		24								24		18.5
7	Defect or failure of equipment or machinery		6				1				7		5.4
9	Involving use of tools - no defect		9								9		7.0
1	Automobile accident						1				1		0.8
	Failure to use protective devices provided												
11	Burns - not from electric source		5					2	4	2	9	14.3	7.0
7	Explosion								9		9		7.0
	Drowning												
14	Asphyxiation					1		11	3	12	3	85.7	2.3
10	Infection from minor wounds		10								10		7.8
12	Miscellaneous		12								12		9.3
138	TOTAL		107		1	1	3	13	18	14	129		
	Per Cent Killed					7.1		92.9				100.0	
	Per Cent Injured		83.0		0.8		2.3		13.9				100.0

K - Killed
I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1941		143			10	49	3	18	13	211
1942	1	108			5	10	26	20	32	138
1943		107		1	1	3	13	18	14	129

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
11	Falling - (other than into water)		11								11		21.6
9	Striking against or struck by objects		9								9		17.7
19	Handling materials		19								19		37.3
	Defect or failure of equipment or machinery												
7	Involving use of tools - no defect		7								7		13.7
	Automobile accident												
	Failure to use protective devices provided												
1	Burns - not from electric source		1								1		1.9
	Explosion												
2	Drowning			2						2		100.0	
	Asphyxiation												
1	Infection from minor wounds		1								1		1.9
3	Miscellaneous		3								3		5.9
53	TOTAL		51	2						2	51		
	Per Cent Killed			100.0								100.0	
	Per Cent Injured		100.0										100.0

K - Killed
I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1941	1	106	2			6		2	3	114
1942		73				1				74
1943		51	2						2	51

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I		I
1	Electric - Contact with charged wires or equipment		1								1		[illegible]
33	Falling -(Other than into water)	1	29				3			1	32	[illegible]	[illegible]
21	Striking against or struck by objects	2	17				2			2	19	[illegible].7	[illegible]
17	Handling materials		17								17		[illegible]
4	Defect or failure of equipment or machinery		2				1		1		4		[illegible]
7	Involving use of tools - no defect		7								7		[illegible]
12	Automobile accident		8				4				12		[illegible]
1	Failure to use protective devices provided		1								1		[illegible]
4	Burns - not from electric source		5								5		[illegible]
	Explosion												
	Drowning												
	Asphyxiation												
7	Infection from minor wounds		7								7		6.2
7	Miscellaneous		4		1		3				[illegible]		7.1
114	TOTAL	3	98		1		13		1	3	113		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		86.7		0.9		11.5		0.9				100.0

K - Killed
I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1941		159		1		32		2		194
1942		113		1	1	20		2	1	136
1943	3	98		1		13		1	3	113

TABLE NO. 24 - ACCIDENTS INVOLVING * OTHER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Electric - Contact with charged wires or equipment		1								1		4.8
5	Falling - (other than into water)		4	1						1	4	33.3	19.0
3	Striking against or struck by objects Handling materials		3								3		14.2
1	Defect or failure of equipment or machinery		1								1		4.8
7	Involving use of tools - no defect		7								7		33.3
1	Automobile accident		1								1		4.8
	Failure to use protective devices provided												
1	Burns - not from electric source		1								1		4.8
	Explosion												
2	Drowning			2						2		66.7	
	Asphyxiation												
2	Infection from minor wounds		2								2		9.5
1	Miscellaneous		1								1		4.8
24	TOTAL		21	3						3	21		
	Per Cent Killed			100.0								100.0	
	Per Cent Injured		100.0										100.0

K - KILLED
I - INJURED

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING *OTHER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1941		35	1		1				2	35
1942		21	3	1	1	2			4	24
1943		21	3						3	21

* Other utilities as herein used consist of: Bridge, Canal, Express, Ferry, Pipe Line and Sewerage.

SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES
COMPARED WITH ACCIDENTS IN 1941 AND 1942

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1943 WITH 1942	YEAR			COMPARISON OF 1943 WITH 1942	YEAR			COMPARISON OF 1943 WITH 1942
	1941	1942	1943		1941	1942	1943		1941	1942	1943	
Steam Railroad	2405	2916	3592	+23.18%	346	358	407	+13.69%	2368	2780	3877	+32.[illegible]
Street Railway	4679	4877	5135	+ 5.29%	66	100	94	- 6.00%	5387	6002	6216	[illegible]
Motor Transportation	1673	1993	1936	- 2.86%	49	80	63	-21.25%	2266	2896	2829	- 2.[illegible]
Electric	536	481	409	-14.97%	37	36	31	-13.89%	510	400	396	-1[illegible].01%
Gas	191	158	138	-12.66%	13	32	14	-56.25%	211	130	12[illegible]	- 0.2%
Water	114	73	53	-27.40%	3	-	2	-	114	74	51	-31.0[illegible]
Telephone & Telegraph	192	135	114	-15.55%	-	1	3	+200.00%	194	136	117	-1[illegible].01%
Other Utilities	36	27	24	-11.11%	2	-	3	+25.00%	35	24	21	-12.[illegible]
TOTAL	9826	10660	11401	+ 6.95%	516	611	617	+ 0.98%	11080	12510	13474	+ 7.7

APPENDIX
- 1943 -
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2166	19.45
Protected by trainmen	1442	12.95
Total Protected	3608	32.40
Unprotected	7529	67.60
TOTAL CROSSINGS	11,137	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	509	14.1
Watchmen	352	9.8
Flashing light signals	1134	31.4
Other visual signals	30	0.8
Bells	141	3.9
Trainmen	1442	40.0
TOTAL	3608	100.0

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	226	70		2	1	3	227	75	302	51.10
Protected by gates	17	5		9	1		18	14	32	5.41
Protected by watchmen	26	11		1			26	12	38	6.43
Protected by bells	11	3					11	3	14	2.37
Protected by visual signals	105	29		13	3		108	42	150	25.38
Protected by trainmen	37	14		1	3		40	15	55	9.31
Total Accidents at Protected Crossings	196	62		24	7		203	86	289	48.90
Total Accidents-Non-Casualty	422				8		430			72.76
Total Accidents-Casualty		132		26		3		161		27.24
TOTAL ACCIDENTS	554		26		11				591	100.00
Per Cent of Total Accidents	93.74		4.40		1.86				100.00	

NC - Non-Casualty
C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K and I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	20	80	1	1	1	2	22	83	105	47.51
Protected by gates	1	4	9				10	4	14	6.33
Protected by watchmen	3	13	1				4	13	17	7.69
Protected by bells	1	2					1	2	3	1.36
Protected by visual signals	10	37	8	5			18	42	60	27.15
Protected by trainmen	5	16		1			5	17	22	9.96
TOTAL	40	152	19	7	1	2	60	161	221	100.00
Killed and injured at protected crossings	20	72	18	6	-	-	38	78	116	52.49
Per Cent of total killed and injured	86.88		11.76		1.36					100.00

K - Killed
I - Injured

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1941, 1942 and 1943

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1941	2166	23	11.5	
	1942	2160	32		39.1
	1943	2166	33		3.1
UNPROTECTED	1941	9177	37		8.8
	1942	9054	42		15.6
	1943	8971	27	35.7	
			INJURED		
*PROTECTED	1941	2166	123		17.1
	1942	2160	89	27.6	
	1943	2166	61	31.4	
UNPROTECTED	1941	9177	96	32.9	
	1942	9054	135		40.6
	1943	8971	100	25.9	

* Not including those protected by trainmen

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENT OCCURED
1941, 1942 and 1943

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	UNPROTECTED	1941	157	- 6.5%	7	- 36.4%	39	- 30.4%
		1942	176	+ 12.1%	14	+100.0%	50	+ 28.2%
		1943	149	- 15.3%	6	- 57.1%	42	- 16.0%
	PROTECTED	1941	260	+ 35.4%	16	- 20.0%	76	+ 11.8%
		1942	268	+ 3.1%	23	+ 43.8%	69	- 9.2%
		1943	202	- 24.6%	27	+ 17.4%	54	- 21.7%
RURAL	UNPROTECTED	1941	204	+ 4.1%	30	+ 30.4%	57	- 34.5%
		1942	171	- 16.2%	25	- 16.7%	68	+ 19.3%
		1943	153	- 10.5%	16	- 36.0%	41	- 39.7%
	PROTECTED	1941	113	+ 8.7%	7	+ 16.7%	47	+ 27.0%
		1942	91	- 19.5%	12	+ 71.4%	37	- 21.3%
		1943	87	- 4.4%	11	- 8.3%	24	- 35.1%

* Cities or boroughs with population over 2,500.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED
1941, 1942 and 1943

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1941	310		5.8
	1942	315		1.6
	1943	281	10.6	
		PERSONS KILLED		
	1941	32		
	1942	45		40.6
	1943	41	8.9	
		PERSONS INJURED		
	1941	72	25.0	
	1942	90		25.0
	1943	77	14.4	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1941	424		15.5
	1942	391	7.8	
	1943	310	20.7	
		PERSONS KILLED		
	1941	28		
	1942	29		3.6
	1943	19	34.5	
		PERSONS INJURED		
	1941	147	3.3	
	1942	134	8.8	
	1943	84	37.3	

TABLE H
HOUR OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	33	5.58	2	13
1 to 1:59 a.m.	29	4.91	1	2
2 to 2:59 a.m.	23	3.89	2	7
3 to 3:59 a.m.	14	2.37	3	4
4 to 4:59 a.m.	6	1.02		
5 to 5:59 a.m.	13	2.20	2	1
6 to 6:59 a.m.	28	4.74	2	8
7 to 7:59 a.m.	20	3.38	4	4
8 to 8:59 a.m.	16	2.71	1	
9 to 9:59 a.m.	23	3.89	7	4
10 to 10:59 a.m.	30	5.08	4	5
11 to 11:59 a.m.	25	4.23	5	6
Noon to 12:59 p.m.	24	4.06	1	1
1 to 1:59 p.m.	25	4.23		7
2 to 2:59 p.m.	28	4.74	4	6
3 to 3:59 p.m.	21	3.55	1	12
4 to 4:59 p.m.	32	5.41	5	10
5 to 5:59 p.m.	22	3.72	3	11
6 to 6:59 p.m.	21	3.55	1	6
7 to 7:59 p.m.	39	6.60	3	9
8 to 8:59 p.m.	25	4.23	1	9
9 to 9:59 p.m.	26	4.40	4	11
10 to 10:59 p.m.	37	6.26	3	12
11 to 11:59 p.m.	31	5.25	1	13
TOTAL	591	100.00	60	161

TABLE I
DAY OF WEEK WHEN GRADE CROSSING ACCIDENT OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	57	9.65	5	11
Monday	75	12.69	8	26
Tuesday	84	14.21	9	23
Wednesday	80	13.54	8	25
Thursday	82	13.87	13	17
Friday	99	16.75	10	29
Saturday	114	19.29	7	30
TOTAL	591	100.00	60	161

TABLE J
MONTH OF YEAR WHEN GRADE CROSSING ACCIDENT OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	71	12.01	3	31
February	74	12.52	3	22
March	45	7.62	5	14
April	33	5.58	8	11
May	37	6.26	4	7
June	22	3.72	4	2
July	34	5.75	1	6
August	31	5.25	2	7
September	35	5.92	1	5
October	68	11.51	4	19
November	41	6.94	3	13
December	100	16.92	22	24
TOTAL	591	100.00	60	161

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENT OCCURRED
1941, 1942 and 1943

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1941	638	58	190
	1942	629	72	207
	1943	529	56	146
Public Siding	1941	68	2	21
	1942	66	1	14
	1943	49	4	12
Private Siding	1941	28		8
	1942	11	1	3
	1943	13		3
Private Grade Crossing (Private Road)	1941	83	7	29
	1942	119	15	20
	1943	87	11	12

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS
1941, 1942 and 1943

CONTACT BETWEEN TRAIN AND -	YEAR	NUMBER OF ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1941	161	49	206
	1942	167	50	206
	1943	132	40	152
Pedestrians	1941	22	11	11
	1942	37	23	14
	1943	26	19	7
Streetcars, Autobuses, Taxicabs	1941	1		1
	1942	1		2
	1943			
Bicycles, Motorcycles, Wagons	1941	1		1
	1942	3	1	2
	1943	3	1	2

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO INJURIES TO PERSONS
1941, 1942 and 1943

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR: DECREASE	PER CENT VARIATION FROM PREVIOUS YEAR: INCREASE
Unprotected	1941	275		8.7
	1942	245	12.2	
	1943	227	7.8	
Protected	1941	274		28.0
	1942	253	7.7	
	1943	203	19.8	

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENTS	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL ACCIDENTS
Auto struck by train	29	103	262	30.[illegible]
Auto driven into side of engine or train moving over crossing	4	34	134	1[illegible].[illegible]
Auto driven into side of engine or train standing on crossing	4	9	37	[illegible].00
Auto driven through lowered gates into side of engine or train moving over crossing			2	0.2[illegible]
Auto driven through lowered gates into side of engine or train standing on the crossing				
Auto driven through lowered gates and struck by engine or train	1		3	.[illegible]
Auto stalled on crossing and struck by train	2	6	96	1[illegible].[illegible]
Total accidents involving contact between train and auto	40	152	554	59.[illegible]
Auto driven through crossing gate - no contact with train			352	3[illegible].0[illegible]
Auto driven into flashing light signals - no contact with train	1	5	18	1.[illegible]
Total accidents involving automobiles at grade crossings	41	157	924	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	61	42	25	29	17.43
Passenger train - reverse movement	5				0.[illegible]
Freight train - normal movement	231	77	27	72	52.11
Freight train - reverse movement	9	2	1	1	1.86
Freight train - car ahead of engine	9	4		13	2.20
Switching movement - engine normal ahead of draft	37	5	1	7	7.11
Switching movement - engine reverse ahead of draft	8	1		1	1.[illegible]
Switching movement - engine pushing cars	14	3	2	5	2.[illegible]
Light engine - normal movement	49	24	4	30	12.35
Light engine - reverse movement	4	2		2	1.01
Motor track cars	2	1		1	0.31
Cars not attached	1				0.17
TOTAL	430	161	60	161	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1941, 1942 and 1943

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	520	1941	536*	1.031	1	18
	512	1942	473*	0.924	3	16
	509	1943	374*	0.735	1	4
Watchman	349	1941	43	0.123	1	8
	348	1942	38	0.109	1	6
	352	1943	37	0.105	3	13
Bells	140	1941	16	0.114	5	9
	139	1942	19	0.137	1	7
	141	1943	14	0.099	1	2
Visual Signals	1157	1941	202*	0.175	8	51
	1161	1942	194*	0.167	9	54
	1164	1943	152*	0.131	11	42
Trainmen	1442	1941	85	0.059	-	31
	1446	1942	67	0.046	3	17
	1442	1943	51	0.035	5	16

* Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES 1941, 1942 and 1943

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1941	9		9
	1942	15	2	7
	1943	10		3
Gates out of order	1941	3		3
	1942	2		
	1943			
Persons passing under or around lowered gates	1941	5	4	1
	1942	8	5	3
	1943	9	9	
Automobile driven through lowered gates striking or being struck by train	1941	16	1	5
	1942	14	1	6
	1943	5	1	
Unassigned	1941	8		
	1942	8		
	1943	8		1

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1941, 1942 and 1943

TYPE OF PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR: DECREASE	PER CENT VARIATION FROM PREVIOUS YEAR: INCREASE
Gates struck and damaged	1941	500		
	1942	436	12.8	
	1943	352	19.3	
Flashing light signals struck and damaged	1941	28		
	1942	31		10.7
	1943	18	41.9	12.0

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS PROTECTED PART TIME BY WATCHMEN AND GATES --- 1934-1943

YEAR	ACCIDENTS	PERSONS: KILLED	PERSONS: INJURED
1934	45	7	33
1935	41	3	42
1936	30	2	30
1937	45	4	39
1938	31	1	26
1939	32		24
1940	46	4	13
1941	42	2	20
1942	55	3	22
1943	34	1	12

TABLE T - CONDITION OF WEATHER WHEN GRADE CROSSING ACCIDENT OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	274	99	30	107	63.11
Cloudy	116	51	26	45	26.23
Fog	26	1	1		4.57
Snow	10	7	3	[illegible]	2.[illegible]
Rain	4	3		[illegible]	1.18
TOTAL	430	161	60	161	10[illegible].00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	29	8	4	9	6.26
1 - 5	151	27	2	31	30.12
6 - 10	87	31	4	39	19.96
11 - 20	87	41	11	45	21.66
21 - 30	39	29	17	25	11.50
31 - 40	17	14	10	6	5.24
41 - 50	9	5	9	3	2.37
51 - 60	2	2	1	1	0.68
61 - 70	3	1		1	0.68
Over 70	1	2	1	1	0.51
Not Reported	5	1	1		1.02
TOTAL	430	161	60	161	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	292	86	30	97	66.90
Wet	44	15	8	15	10.44
Muddy	1	1		1	0.35
Snowy	37	11	1	12	8.50
Icy	22	8	1	15	5.31
Not Reported	34	14	1	14	8.50
TOTAL	430	135	41	154	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	44	2	14	7.79
21 - 30	79	4	22	13.98
31 - 40	99	15	52	17.52
41 - 50	60	5	13	10.62
51 - 60	40	11	15	7.08
Over 60	26	4	8	4.60
Not Reported	217		30	38.41
TOTAL	565	41	154	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	519	41	146	91.86
Female	35		8	6.19
Not Reported	11			1.95
TOTAL	565	41	154	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	447	39	131	79.12
Not Familiar	22		4	3.89
Not Reported	96	2	19	16.99
TOTAL	565	41	154	100.00

TABLE 2

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	3		3	0.51
Allegheny	70	8	21	11.84
Armstrong	9	2	2	1.53
Beaver	2		1	0.34
Bedford	1			0.17
Berks	7	1	2	1.18
Blair	7		2	1.18
Bradford	7	2		1.18
Bucks	9		2	1.53
Butler	9	1	1	1.53
Cambria	14	1	6	2.37
Cameron	2		2	0.34
Carbon	6	2	1	1.01
Centre	2		1	0.34
Chester	7		3	1.18
Clarion	4			0.68
Clearfield	20		2	3.38
Clinton	8	1	2	1.36
Columbia	5		7	0.84
Crawford	7		2	1.18
Cumberland	8	1	2	1.36
Dauphin	4		5	0.68
Delaware	17	1	1	2.88
Elk	1			0.17
Erie	32	5	7	5.41
Fayette	24	1	4	4.06
Forest				
Franklin	4		1	0.68
Fulton				
Green	1			0.17
Huntingdon				
Indiana	10		1	1.69
Jefferson	8		1	1.36
Juniata	1			0.17

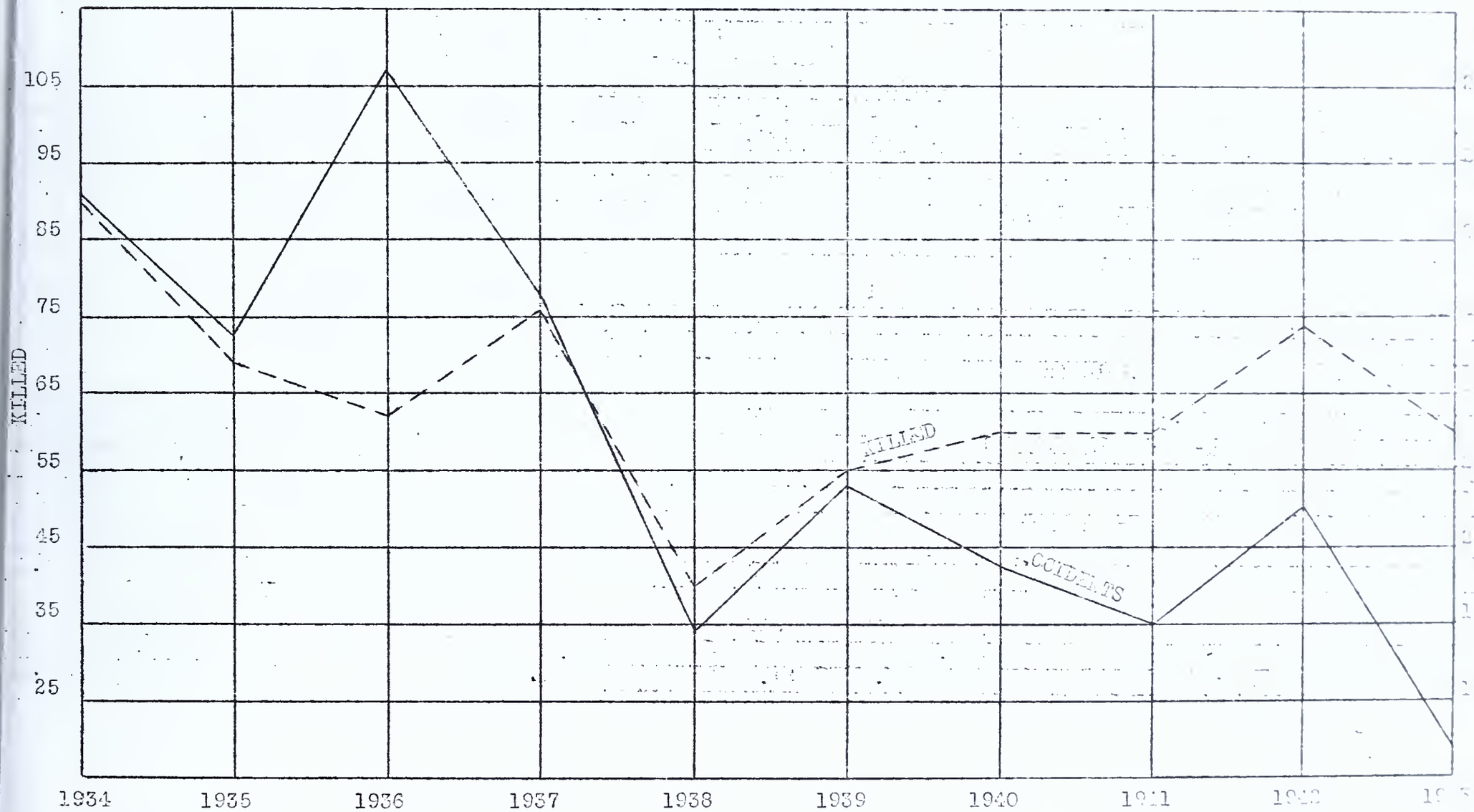
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	12	2	1	2.03
Lancaster	5	2	3	[illegible]
Lawrence	8	1	3	[illegible]
Lebanon	6	2		[illegible]
Lehigh	6	1	1	1.[illegible]
Luzerne	22	1	7	[illegible]
Lycoming	11	1	1	1.[illegible]
McKean	4		1	[illegible]
Mercer	24	2	3	[illegible]
Mifflin	3	1		0.51
Monroe				
Montgomery	14	2	3	2.37
Montour	6	1	1	1.01
Northampton	5	1	2	0.[illegible]
Northumberland	20	1	2	3.3[illegible]
Perry	1	1		0.17
Philadelphia	19	3	5	3.21
Pike				
Potter				
Schuylkill	13		3	2.20
Snyder				
Somerset	5		1	0.84
Sullivan				
Susquehanna	3		1	0.51
Tioga	4		1	0.68
Union	2		3	0.34
Venango	6		2	1.01
Warren	4		1	0.68
Washington	25	10	6	4.23
Wayne	3			0.51
Westmoreland	31	1	17	5.24
Wyoming	2			0.34
York	18	1	2	3.05
TOTAL	591	60	161	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH AUTOMOBILE REGISTRATIONS
1934 - 1943

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON -CASUALTY ACCIDENTS	PERSONS		AUTOMOBILES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1934	11,992	640	90	384	1,736,951	3.68
1935	11,829	674	69	319	1,787,836	3.77
1936	11,764	669	62	378	1,913,193	3.50
1937	11,509	638	77	322	2,045,228	3.12
1938	11,667	459	40	277	2,035,667	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,362	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89

* Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS
AND NUMBER OF FATALITIES AT GRADE CROSSINGS
OVER STEAM RAILROADS IN PENNSYLVANIA
1934 - 1943



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
338	Collision with other vehicle	1	56		322			1	5	2	208		3	4	594	40.0	60.3
10	Collision with fixed object		1		18										19		2.0
190	Struck by taxicab		1		20			4	166				8	4	195	40.0	19.8
25	Running or walking into side of taxicab							1	24				1	1	25	10.0	2.6
20	Boarding or alighting(Standing Vehicle)		1		20										21		2.1
9	Falling within vehicle				9										9		0.9
29	Caught by vehicle doors				29								1		30		3.0
9	Jumping on or off vehicle in motion				8				1						9		0.9
46	Sudden stop of vehicle				58										58		5.9
4	Defect or failure of equipment				8										8		0.8
5	Vehicle skidded				7										7		0.7
4	Highway defect				4										4		0.4
1	Apparent reckless operation of vehicle	1												1		10.0	
4	Miscellaneous				5				1						6		0.6
694	TOTAL	2	59		508			6	197	2	208		13	10	985		
	Per Cent Killed	20.0						50.0		20.0						100.0	
	Per Cent Injured		6.0		51.6				20.0		21.1		1.3				100.0

K - Killed
I - Injured

TABLE II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
356	Collision with other vehicle		15	1	433				7	6	344		1	7	800	22.0	47.7
25	Collision with fixed object		1		50				4						54		3.2
113	Struck by auto-bus		1	3	4			14	89		2	1	9	18	105	58.0	6.3
57	Running or walking into side of auto-bus				6			3	42		1		7	3	56	9.7	3.3
274	Boarding or alighting (Standing vehicle)		2		272								1		275		16.4
81	Falling within vehicle		1		80										81		4.9
52	Caught by vehicle doors				51		1								52		3.1
3	Jumping on or off vehicle in motion				1				2						3		0.2
67	Sudden stop of vehicle				75				1		1				77		4.6
24	Defect or failure of equipment	2	4	1	98				2					3	104	9.7	6.2
14	Vehicle skidded		1		28				1		1				31		1.9
2	Highway defect				2										2		0.1
3	Apparent reckless operation of vehicle				3										3		0.2
28	Miscellaneous		10		16				1		1		1		29		1.7
1099	TOTAL	2	35	5	1119		1	17	148	6	350	1	19	31	1672		
	Per Cent Killed	6.5		16.1				54.9		19.3		3.2				100.0	
	Per Cent Injured		2.0		67.0		0.1		8.9		20.9		1.1				100.0

K - Killed
I - Injured

TABLE III - ACCIDENTS INVOLVING GROUP & PARTY
SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
	Collision with other vehicle																
	Collision with fixed object																
	Struck by taxicab, autobus or truck																
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
	TOTAL																
	Per Cent Killed																
	Per Cent Injured																

K - Killed
I - Injured

Note: No accidents reported during the year

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
70	Collision with other vehicle	1	17	1	3					4	74	1	1	7	95	41.1	66.0
9	Collision with fixed object		7						1				1		9		6.[illegible]
24	Struck by taxicab, autobus or truck	1	2					4	15		1		2	5	20	29.4	13.9
6	Running or walking into side of taxicab, autobus or truck		1						5	1				1	6	5.9	4.[illegible]
	Boarding or alighting (Standing Vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
5	Jumping on or off vehicle in motion	1			1		1	1	2					2	4	11.8	2.[illegible]
	Sudden stop of vehicle																
3	Defect or failure of equipment		1								1		1		3		2.[illegible]
1	Vehicle skidded		1												1		0.[illegible]
1	Highway defect		1												1		0.[illegible]
	Apparent reckless operation of vehicle																
6	Miscellaneous	1	5									1		2	5	11.8	3.4
125	TOTAL	4	35	1	4		1	5	23	5	76	2	5	17	144		
	Per Cent Killed	23.5		5.9				29.4		29.4		11.8				100.0	
	Per Cent Injured		24.3		2.8		0.7		16.0		52.8		3.4				100.[illegible]

K - Killed
I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I
13	Collision with other vehicle	1	6					4	13			5	19	100.0	76.
	Collision with fixed object														
3	Struck by taxicab, autobus or truck						2				1		3		12.
1	Running or walking into side of taxicab, autobus or truck						1						1		4.
	Boarding or alighting (Standing vehicle)														
	Falling within vehicle														
	Caught by vehicle doors														
	Jumping on or off vehicle in motion														
	Sudden stop of vehicle														
	Defect or failure of equipment														
1	Vehicle skidded		1						1				2		8
	Highway defect														
	Apparent reckless operation of Vehicle														
	Miscellaneous														
18	TOTAL	1	7				3	4	14		1	5	25		
	Per Cent Killed	20.0						80.0						100.0	
	Per Cent Injured		28.0				12.0		56.0		4.0				100

K - Killed
I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DANCE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1941		46	1	344			6	71		121			7	582
1942		60		406			6	96		187		9	6	[illegible]
1943	2	59		508			6	197	2	208		13	10	[illegible]

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1941		54	1	928			6	123	7	309		15	14	1429
1942	2	29	23	1339		1	10	150	10	364	1	21	46	1904
1943	2	35	5	1119		1	17	148	6	350	1	19	31	1672

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1941				15			2	1		1			2	17
1942				5						1				6
1943*														

K - Killed
I - Injured

* No accidents reported during year.

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1941	5	26		4		3	4	17	9	115		6	18	171
1942	2	28		2		2	2	17	13	115	5	8	22	172
1943	4	35	1	4		1	5	23	5	76	2	5	17	144

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1941	2	9					6	17		41			8	67
1942	4	15					1	4		29	1	8	6	56
1943	1	7						3	4	14		1	5	25

K - Killed
I - Injured